

# **%TABLEN & %MVMODELS Macro**

**Created by: Jeffrey Meyers, Mayo Clinic**

Presented by: Makayla Schissel, UNMC

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Credit: The majority of the items in this presentation came from Mr. Meyer's existing SAS User's Group presentations

# %TABLEN Features

- Produces summary tables for baseline characteristics
- Allows the following variable types:
  - Continuous
  - Discrete
  - Date
  - Survival
  - Logistic regression
- Can output to RTF, HTML, PDF, EXCEL, and PowerPoint



# %TABLEN Example Output

	Status			P-value
	Alive (N=3218)	Dead (N=1991)	Total (N=5209)	
<b>Sex, n (%)</b>				<.0001 <sup>1</sup>
Female	1977 (61.4%)	896 (45.0%)	2873 (55.2%)	
Male	1241 (38.6%)	1095 (55.0%)	2336 (44.8%)	
<b>Age at Start</b>				<.0001 <sup>2</sup>
N (Missing)	3218 (0)	1991 (0)	5209 (0)	
Mean (SD)	41.1 (7.51)	48.8 (8.05)	44.1 (8.57)	
Median (IQR)	40.0 (35.0, 46.0)	50.0 (43.0, 56.0)	43.0 (37.0, 51.0)	
Range	28.0, 62.0	29.0, 62.0	28.0, 62.0	
<b>Height</b>				0.0057 <sup>2</sup>
N (Missing)	3217 (1)	1986 (5)	5203 (6)	
Mean (SD)	64.7 (3.59)	65.0 (3.56)	64.8 (3.58)	
Median (IQR)	64.5 (62.0, 67.3)	65.0 (62.5, 67.8)	64.5 (62.3, 67.5)	
Range	54.8, 76.5	51.5, 76.0	51.5, 76.5	



# %TABLEN Required Parameters

- DATA: user input dataset to summarize
- VAR: space delimited list of variables to summarize
- TYPE: designates which type of each variable listed in VAR
  - 1: Continuous
  - 2: Discrete
  - 3: Date
  - 4: Survival
  - 5: Logistic regression/binomial



# %TABLEN Optional Parameters

- Grouping
  - BY: a variable to split distributions into multiple columns and allows p-value comparisons
  - COLBY: Nests the same set of columns specified by VAR and BY within each level of another variable in multiple columns
  - ROWBY: Same as COLBY but in rows instead of columns
  - WHERE: subsets the input DATA within the macro



# **%TABLEN P-Value Codes if Grouping Variable is Present (continuous)**

- 0 = No p-value
- 1 = Kruskal-Wallis
- 2 = Exact Kruskal-Wallis (long calculation times)
- 3 = Wilcoxon rank sum
- 4 = Exact Wilcoxon rank sum (long calculation times)
- 5 = ANOVA F-test
- 6 = Equal variance two sample t-test
- 7 = Unequal variance two sample t-test



# **%TABLEN P-Value Codes if Grouping Variable is Present (discrete)**

- 0 = No p-value
- 1 = Chi-square
- 2 = Fisher's exact
- 3 = Cochran-Armitage trend test (Either BY or VAR must have 2 levels only)



# **%TABLEN P-Value Codes if Grouping Variable is Present (logistic)**

- 0 = No p-value
- 1 = logistic regression type-3 Wald p-value





# %MV MODELS Features

- Performs survival analysis and logistic regression
- Outputs results to a forest plot or table
- Multiple options and features for stratification
- Can output to RTF, HTML, PDF, EXCEL, and PowerPoint
- Contains error checking, documentation, and cleans up after itself



# %MV MODELS Required Parameters

- DATA: specifies user input dataset
- NMODELS: number of models being run.  
Default=1
- METHOD: determines if SURVIVAL or LOGISTIC models will run
- DISPLAY: determines which output plots/statistics are shown and which order in the forest plot/table
- Default for DISPLAY parameters is STANDARD which changes depending on what method and options are chosen



# %MVMODELS Logistic Parameters

- EVENTCOV: determines the binomial event variable. This is the dependent covariate in logistic regression models
- EVENT: determines the event to be considered the “success” in binomial analyses and the event to be modeled in logistic regression models



# %MVMODELS Available Statistics

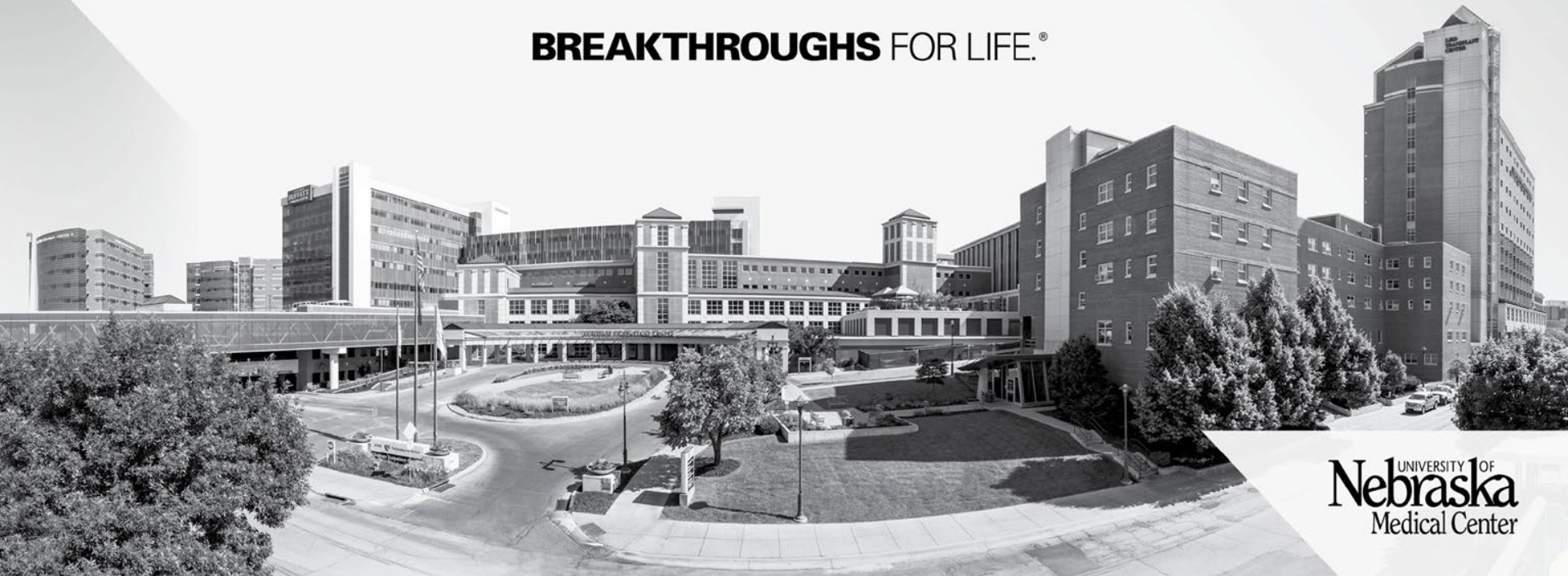
- Number patients and events
- Binomial success rates for designated event
- Odds ratios
- P-values (type-3 Wald test, Wald, Chi-square, Fisher's exact)
- Fit statistics





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