

# TreeScan Version History

## SUMMARY

- 2011 **Version 1.0:** Poisson model, Bernoulli model
- 2014 **Version 1.1:** Tree-temporal scan statistic. Statistical power estimation. Data import wizard. Improved user interface.
- 2015 **Version 1.2:** Tree-temporal scan statistic adjusted for overall temporal pattern. Purely temporal scan statistic. Day of week adjustment.
- 2016 **Version 1.3:** Scan multiple trees and allowing for nodes with multiple parents. Statistical power estimation for the conditional Bernoulli, tree-temporal and purely temporal scan statistics.
- 2018 **Version 1.4:** Differential follow-up time.

## DETAILS

### **Version 1.4, June, 2018**

#### *New Analytical Features*

Differential follow-up time with temporal scan statistics.  
Multiple ranges in the data time range.  
Scanning risk window parameters.  
Tree visualization in html output file.

#### *Minor Fixes*

Mac version updated to work with Oracle Java 9.

### **Version 1.3, August, 2016**

#### *New Analytical Features*

Scan multiple trees simultaneously.  
Allows for leaves and nodes with multiple parents.  
Statistical power estimation for the conditional Bernoulli model.  
Statistical power estimation for the tree-temporal scan statistic.  
Statistical power estimation for the purely temporal scan statistic.  
Ability to restrict the scanning to only certain pre-specified levels of the tree.

#### *Minor Fixes*

Correction in import wizard that causes memory leak when importing file.  
Correction to command-line override of randomization seed.

### **Version 1.2, November, 2015**

#### *New Analytical Features*

Tree-temporal scan statistic, conditioned on node and time, to adjust for overall temporal pattern.  
Purely temporal scan statistic.  
Adjustments for day of week and node-by-day of week interaction.  
Calculation of attributable risk.

### *Other Improvements*

Improved import wizard.

New example data sets.

Relative risk reported for all scan types, replacing observed divided by expected.

Tree structure attributes reported in the data summary.

### **Version 1.1.2, March, 2015**

#### *Minor Fixes*

Correction to v1.1.1 random data generation for unconditional Poisson power estimation.

### **Version 1.1.1, March, 2015**

#### *Improvements*

Statistical power estimates reported to a tabular file.

#### *Minor Fixes*

Correction to log likelihood tie-breaking mechanism when calculating p-values.

Correction to random data generation for conditional Poisson power estimation.

### **Version 1.1, November, 2014**

#### *New Analytical Features*

Tree-temporal scan statistic.

Statistical power estimation.

#### *Other Improvements*

Data import wizard

Advanced graphical user interface options

Application update feature

Improved command-line options

Improved user interface

TreeScan user guide in .pdf format

New TreeScan logo and icon

### **Version 1.0, 2011**

#### *Analytical Features*

Poisson model

Bernoulli model

Simple, pairs, triples and ordinal cuts, defined by a cut type file

#### *Other Improvements*

Separate case and tree input files

Graphical user interface

HTML results file

Comma separated value (CSV) results data file

Parallelized simulations