Minitab®

ADDITIVE
SOFT- & HARDWARE FÜR TECHNIK & WISSENSCHAFT

What's New in Minitab 21.3 & 21.2 & 21.1

Take Your Analytics to the Next Level

Access trusted, proven, and modern analytics from Minitab Statistical Software with the new Graph Builder.

What's New in Minitab 21.3

Core Minitab:

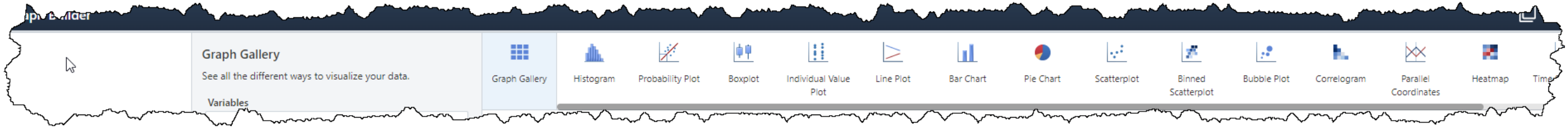
- Interval Plot in Graph Builder
- Matrix Plot in Graph Builder
- Distribution

Enhanced three new **"chooser" add-on modules**:

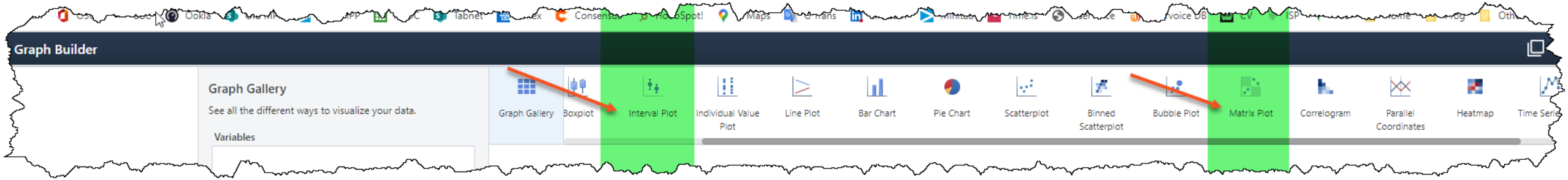
- Measurement System Analysis
- Sample Size
- Insurance KPIs [for organisations providing insurance to their customers]

Graph Builder:

v21.2



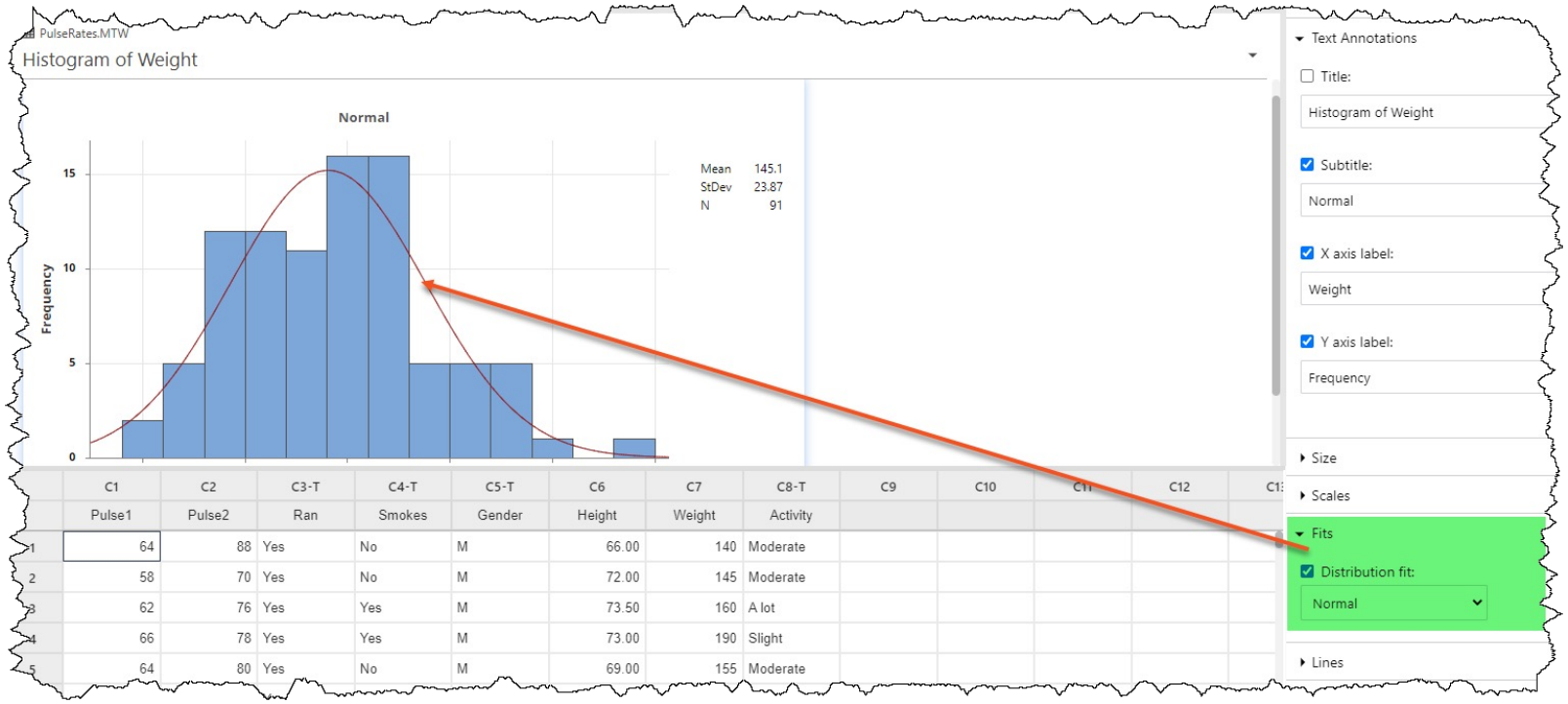
v21.3



Graph Builder:

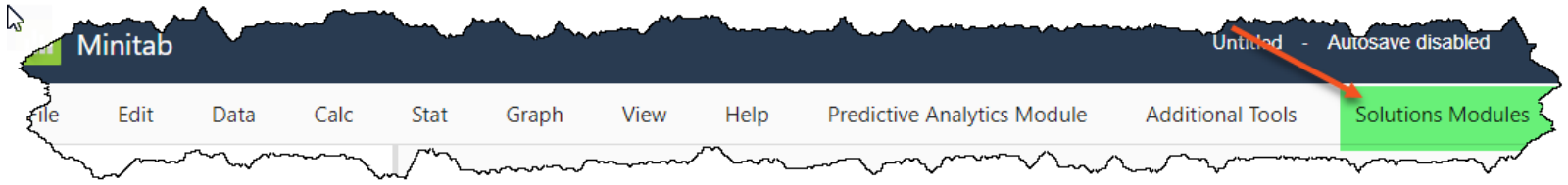
Graph Builder Histogram: Distribution fit added

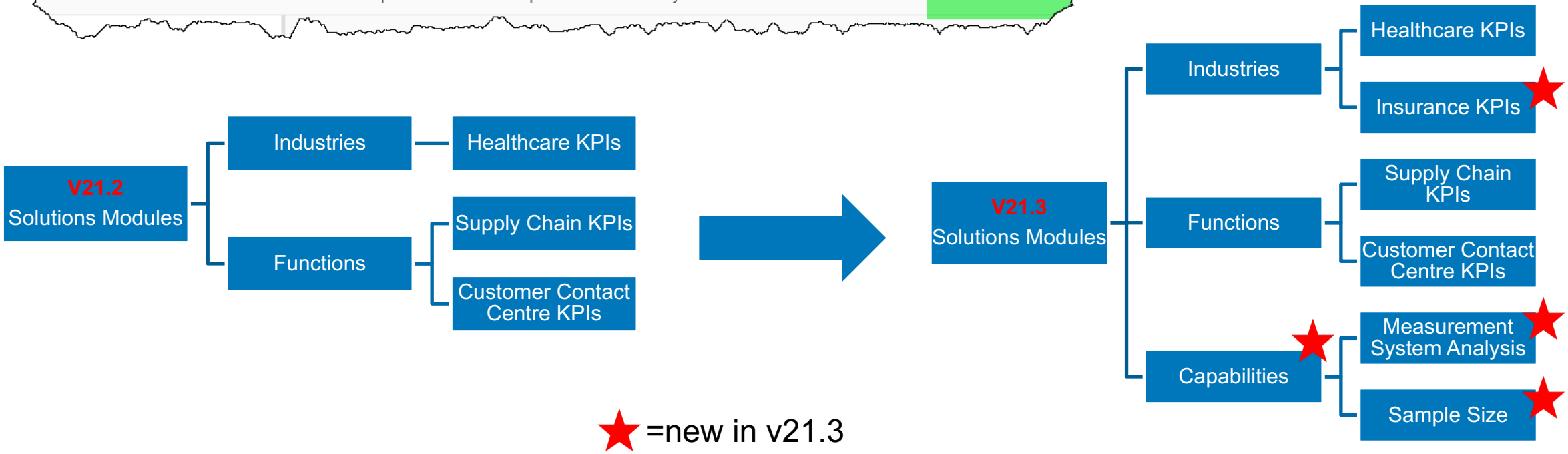
The new histogram fit is to add a model fit after you have created a histrogram in the GraphBuilder: Create histogram in GB. Click dropdown top right of Graph > Graph Options > “Fits” dropdown ; tick ‘distribution fit and select distribution



Choosers:

On the optional ‘Solutions Modules’ menu, active when purchased. The ‘MSA’ and ‘Sample Size’ options I see as being of interest to, and sellable to, most typical Minitab users.





What's New in Minitab 21.2

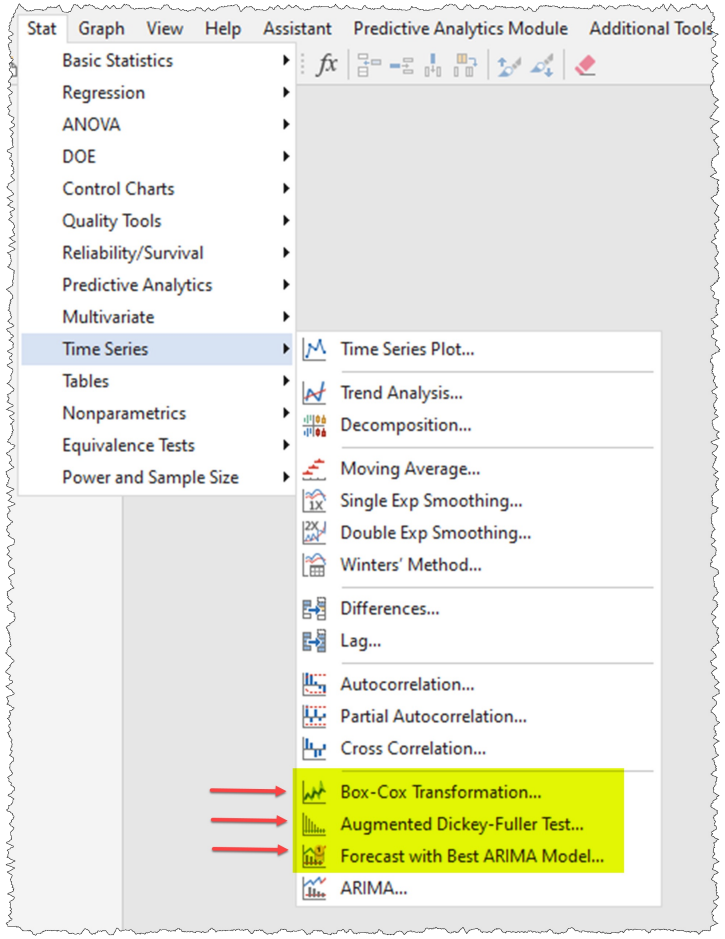
Highlight key changes/developments

[Stat] menu - additions to 'Time Series' area:

- Forecast with Best ARIMA Model
- Augmented Dickey-Fuller Test
- Box-Cox Transformation

[Graph] menu – additions to Graph Builder tool:

- Line Plot
- Stacked Area Graph
- Pie Chart



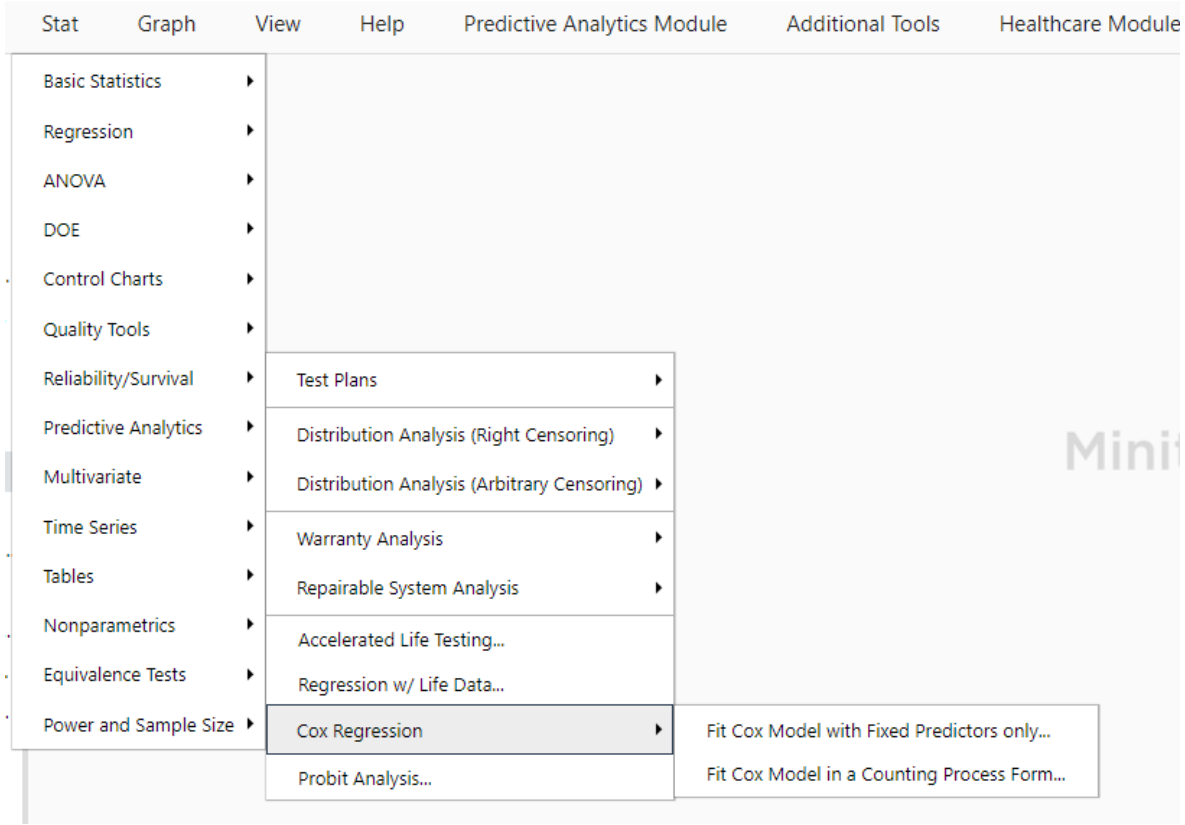
What's New in Minitab 21.1

- New Statistical Method: **Cox Regression**
- Graph Builder Enhancement: **Interactive Probability Plot**
- Enhanced Visualisations: Additional **Graph Editing**

- Predictive Analytics Module enhancement: **Automated Machine Learning**

- Healthcare Module enhancement: **Localisation** for all languages (Spanish, French, German, Portuguese, Japanese, Korean, Simplified Chinese)

New Statistical Method: Cox Regression



- Cox regression is method for investigating the effect of several variables upon the time a specified event takes to happen
- The Cox Regression command is in the Reliability menu
- Cox Regression is also known as Proportional Hazards Regression

How is this different from other Regression techniques?

- Linear Regression is for continuous outcomes
- Logistic Regression for categorical outcomes
- Cox Regression is for time to event data (survival analysis)

New Statistical Method: Cox Regression

Example:

Medical researchers want to determine the success rate of recovery from a bone marrow transplant as a treatment for acute leukemia. Recovery depends on factors such as the patient's *Risk Category* at the time of transplantation, their *Disease Stage*, and whether their platelet count returned to normal levels. *Risk Category* and *Disease Stage* are fixed predictors because they do not change throughout the study. However, a patient's platelet count is a time-dependent predictor because the count can change during the recovery process.

The medical researchers study 137 patients after they receive the transplant and record the number of days they are disease-free. A patient is not disease-free if they die before their platelet count returns to normal or if their leukemia returns after their platelet count returns to normal.

New Statistical Method: Cox Regression

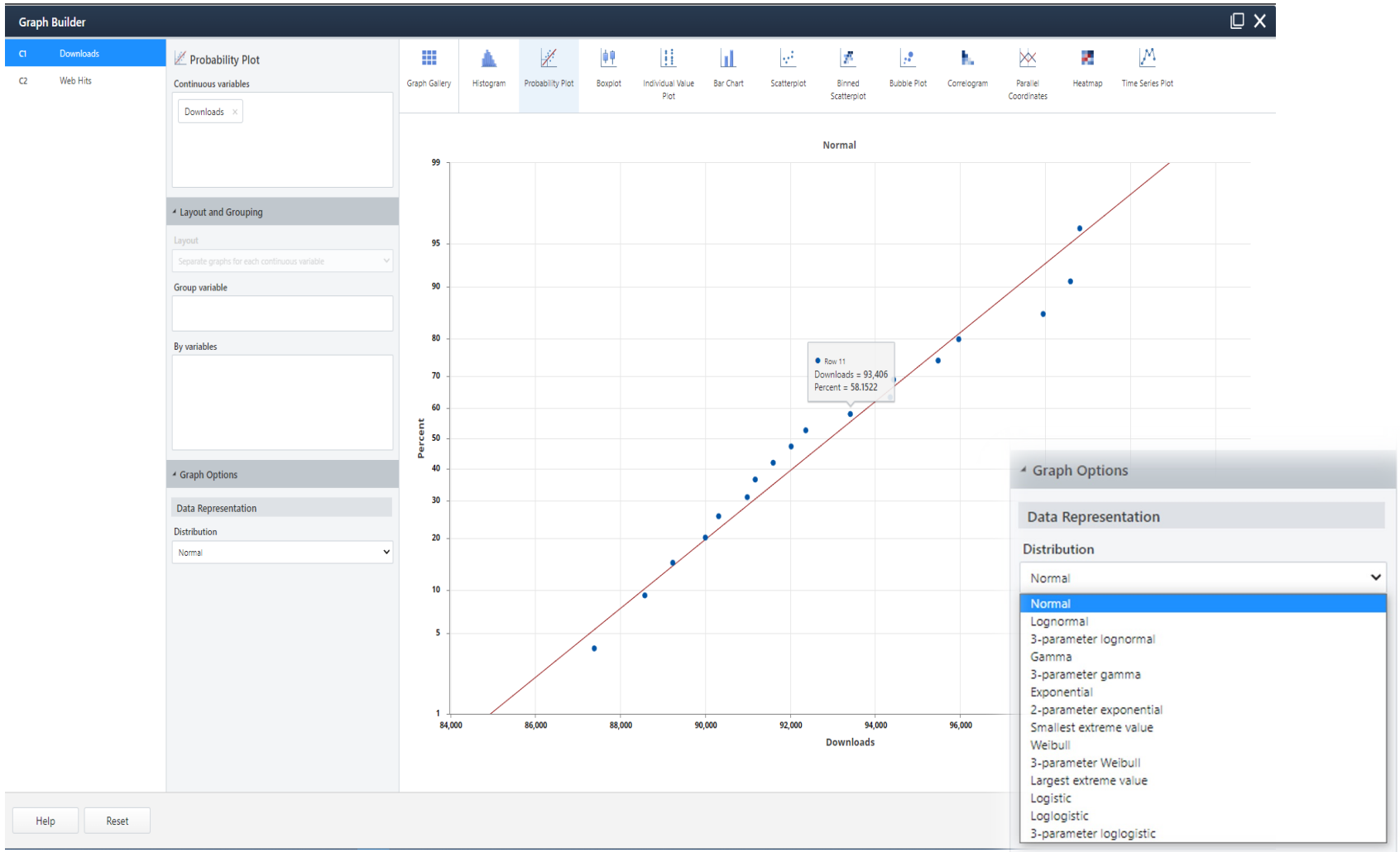
Example:

Medical researchers want to determine whether the stage of larynx cancer affects the chance of death. The researchers plan to adjust the analysis for a patient's age. The researchers record the stage and age of 90 male cancer patients. Then, the researchers record the number of years between the first treatment and either the patient's death or the end of the study. Finally, the researchers record whether the patient died.

The medical researchers perform Cox regression to evaluate the relationship between death, age, and the stage of the cancer. The researchers also want to estimate the survival probability for a 60-year-old man for each stage.

Visualisations: Interactive Probability Plot added to the Graph Builder

- An interactive probability plot is now available in the Graph Builder
- Select fits from 14 distributions

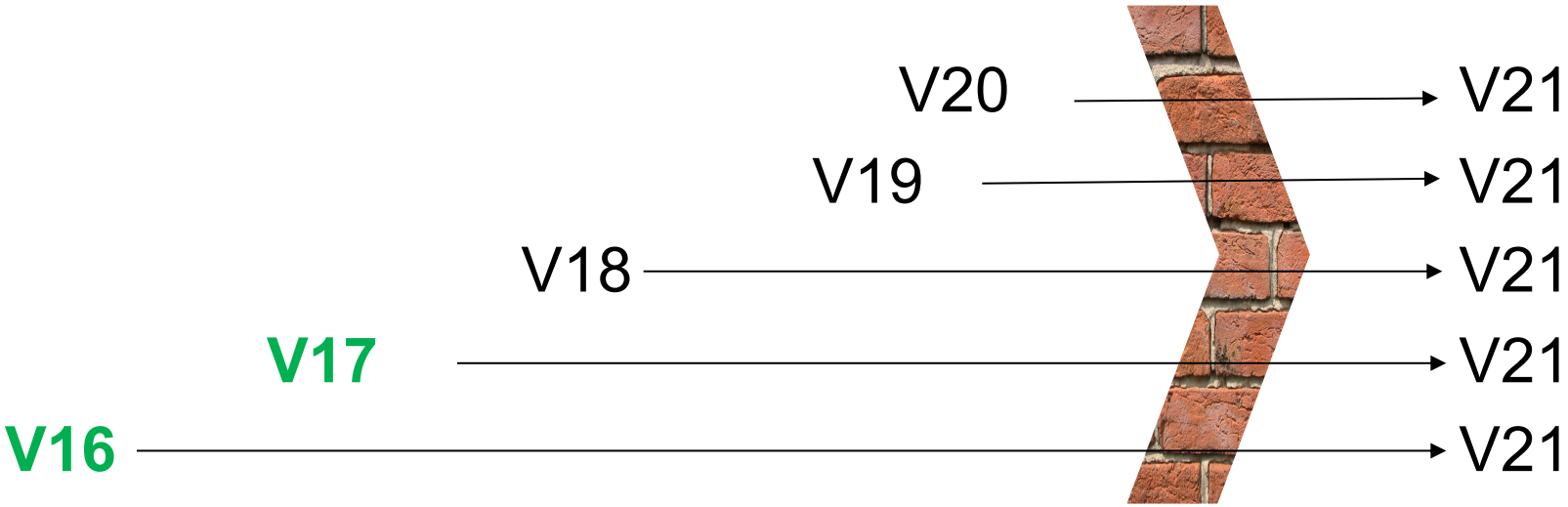


Enhanced Visualisations: Additional Graph Editing

- You can now add and customize text annotations like titles and axis labels, modify graph-specific scale and distribution types, and access certain display options like transposing axes for categorical graphs and other data representation options.

Compatibility of project files:

.MPJ **.MPJ** **.MPJ** **.MPX** **.MPX**

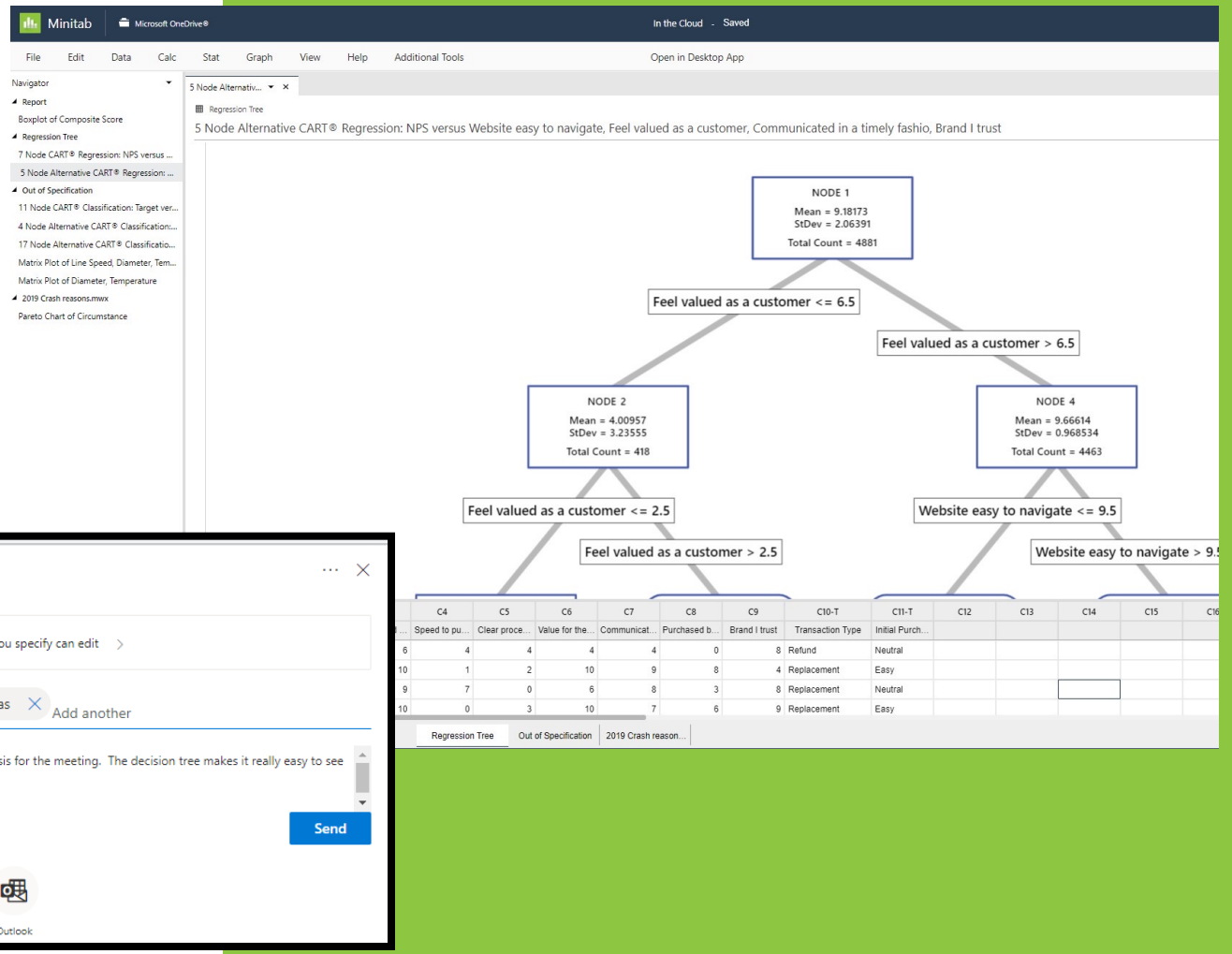


On the update path from V16-V18 graphics objects loose connection to data, also the ReportPad from V16-V18 is not converted into V20/V21 files. **ADDITIVE offers support and consulting-packages** up to complete migration from any of your old Minitab projets.
Please contact your account manager.

Minitab®

Since V20 from anywhere in the cloud

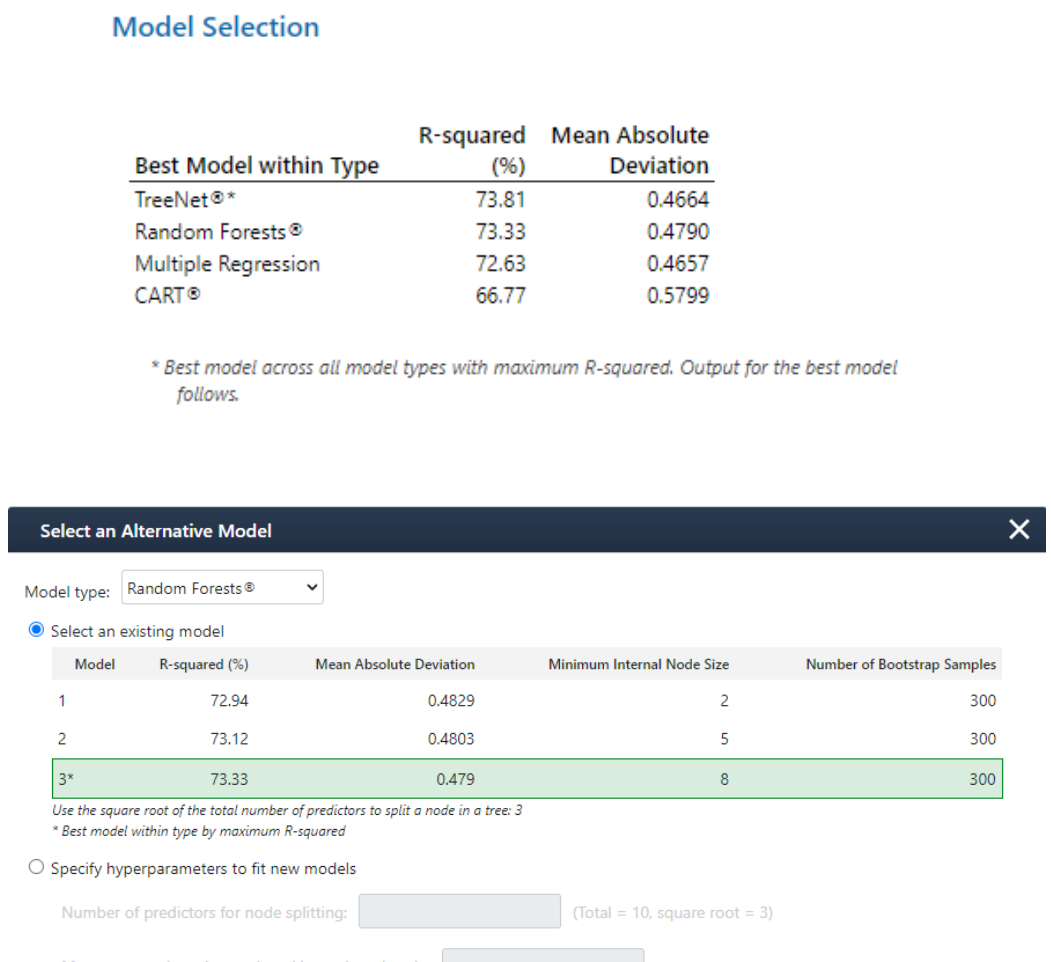
- Access from nearly any device
- Minitab now delivered as both desktop application and new web application
- Share projects with a single click
- Data Access and store from Google Drive™, Microsoft OneDrive® or local files
- Single user sign-on available
- Named-User rental via Cloud



Predictive Analytics Module: Automated Machine Learning

- It is common for researchers to try a few different machine learning models when evaluating their data. The new AutoML feature will evaluate the following models:
  - Classification and Regression Trees
  - TreeNet
  - Random Forests
  - Regression
- Minitab Statistical Software will pick the best model based on criteria and display the model fit
- Users have the flexibility to easily select one of the other models

This feature is only available in the Predictive Analytics Module, which is an optional module.



Model Selection

Best Model within Type	R-squared (%)	Mean Absolute Deviation
TreeNet®*	73.81	0.4664
Random Forests®	73.33	0.4790
Multiple Regression	72.63	0.4657
CART®	66.77	0.5799

** Best model across all model types with maximum R-squared. Output for the best model follows.*

Select an Alternative Model

Model type: Random Forests®

Select an existing model

Model	R-squared (%)	Mean Absolute Deviation	Minimum Internal Node Size	Number of Bootstrap Samples
1	72.94	0.4829	2	300
2	73.12	0.4803	5	300
3*	73.33	0.479	8	300

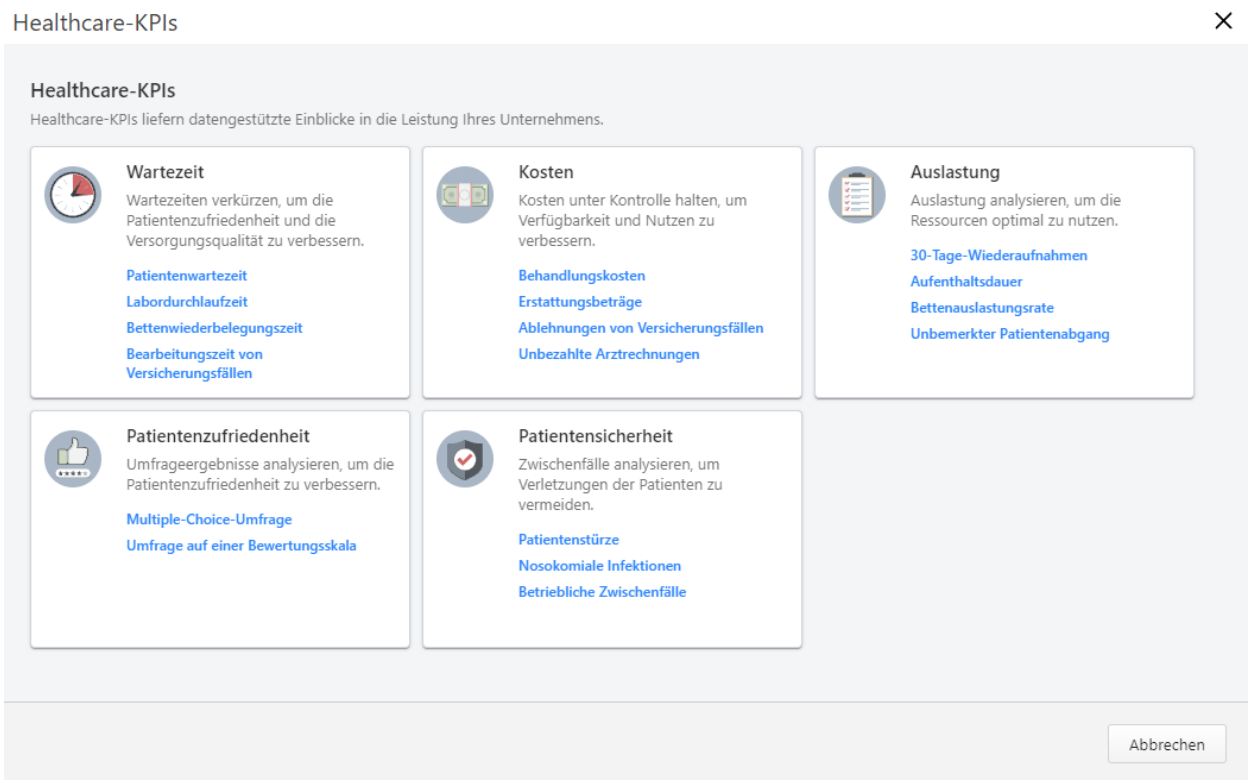
Use the square root of the total number of predictors to split a node in a tree: 3
** Best model within type by maximum R-squared*

Specify hyperparameters to fit new models

Number of predictors for node splitting: (Total = 10, square root = 3)

Healthcare Module: Localisation

- The optional Healthcare module is now available in all Minitab supported languages
- **Localisation** for all languages
  - Spanish
  - French
  - German
  - Portuguese
  - Japanese
  - Korean
  - Simplified Chinese



With the optional Healthcare module, medical professionals in the hospital management can concentrate on improving the most important performance indicators (KPIs) such as waiting time, costs, occupancy, patient-safety and patient-satisfaction.

ADDITIVE ACADEMY – Minitab Certified Trainings

Minitab-Grundlagen	07.-08.+10.-11.03.2022	Online
	04.+05.07.2022	Präsenz
	12.-13.+15.-16.09.2022	Online
	21.+22.11.2022	Präsenz
Statistische Prozesskontrolle mit Minitab	14.+15.03.2022	Online
	06.07.22	Präsenz
	19.+20.09.2022	Online
	23.11.22	Präsenz
Faktorielle Versuchspläne	17.+18.03.2022	Online
	06.07.22	Präsenz
	19.+20.09.2022	Online
	23.11.22	Präsenz
Wirkungsflächenversuchspläne	21.+22.03.2021	Online
	07.07.22	Präsenz
	22.+23.09.2022	Online
	24.11.22	Präsenz
Statistische Versuchsplanung in der Praxis	24.+25.03.2022	Online
	08.07.22	Präsenz
	26.+27.09.2022	Online
	25.11.22	Präsenz

Automatisierung von Analysen	23.+24.03.2022	Online
	28.+29.09.2022	Online
Einführung in die Zuverlässigkeits- und Lebensdaueranalyse	04.+05.04.2022	Online
	06.12.22	Präsenz
Lebensdaueranalyse für Fortgeschrittene	07.+08.04.2022	Online
	07.12.22	Präsenz
Workshop: Einblick in den Minitab Workspace anhand von Lean Tools	28.+29.03.2022	Online
Workshop: Einblick in den Minitab Workspace anhand von Six Sigma Tools	26.+27.09.2022	Online
Workshop: Minitab Workspace individualisieren	30.03.22	Online
Workshop: Statistik für Six Sigma, DFSS, Industrie 4.0 und Big Data	11.+12.10.2022	Präsenz
Workshop: Minitab in einem DMAIC-Projekt	07.+08.07.2022	Präsenz
Workshop: Sicherere Modellvorhersagen durch Simulation	28.+29.09.2022	Online

www.additive-academy.de/minitab

ADDITIVE „Specialist for Computation, Visualization and Automation“

Your Partner for

... Support

... Training & Consulting

... Software Licensestrategies und License-control

... Programming & Applications, for desktop and web

Your contact for sales, licenseing and consulting

ADDITIVE Minitab Team

E-Mail: minitab@additive-net.de

Phone: +49 6172 5905 30

www.additive-minitab.de **www.additive-net.de**

Technical request

ADDITIVE Support

E-Mail: support@additive-net.de

Phone: +49 6172 5905 20