

Single Day Event

Smarter Sharing in Pharma:
From the SAS Packages Framework to PharmaForest

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Yutaka Morioka (EPS Corporation)
Hiroki Yamanobe (Maruho Co.,Ltd.)



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Agenda

How to Share SAS Code?

How SPF(SAS Package Framework) Work

PharmaForest

Packages

PharmaForest Gallery

Forest Navigator

Let's try - How to use

Community





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How to Share SAS Code?

Common Ways Today


Paper, Forums & Blogs, GitHub

- Manual copy & paste
- Requires code modification
- Risk of execution failure

The Smart Way

SPF with PharmaForest

- Centralized sharing
- Easy navigation
- Version control
- Collaboration ready

A teal thought bubble with a black outline, containing the text "Is this really efficient?". Three small teal circles lead from the bubble towards the "Common Ways Today" section.

Is this really
efficient?

SPF: SAS Packages Eramework





How to Share SAS Code?

SAS Packages Framework is best solution

SAS Packages Framework (SPF) standardizes how SAS code and resources are structured and shared across projects. SAS Packages Framework (SPF) developed by Bartosz Jablonski.

- Provides a unified structure for organizing SAS code, formats, macros, and functions
- Bundles code, data, and documentation into reusable SAS Packages
- Enables easy loading and distribution of shared assets across different projects
- Promotes consistent quality, efficient development, and knowledge sharing
- Each bundle is referred to as a SAS Package

SAS Packages

SAS package is built on top of SAS Packages Framework (**SPF**) developed by Bartosz Jablonski.

You can also find more SAS Packages in the SAS Packages Archive (SASPAC).





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SPF enables package management in SAS





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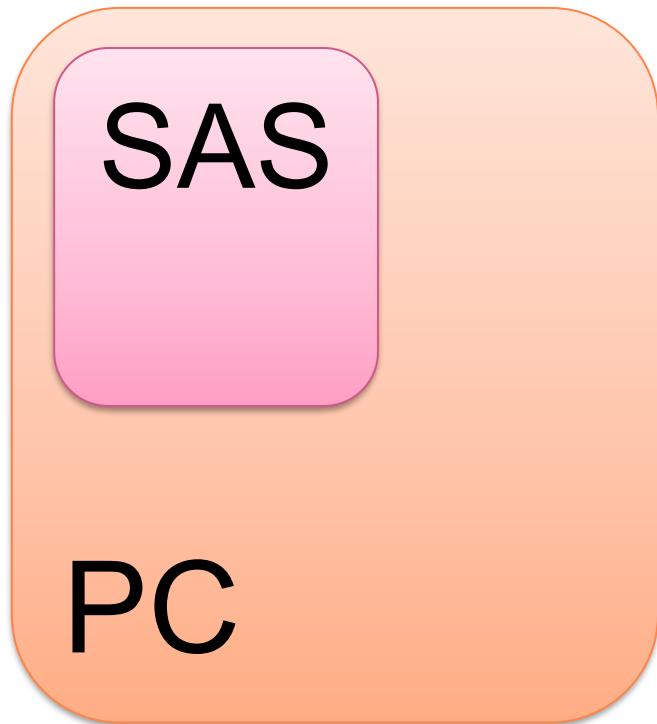
Let's try - How to use

Community





How SPF_(SAS Package Framework) Work

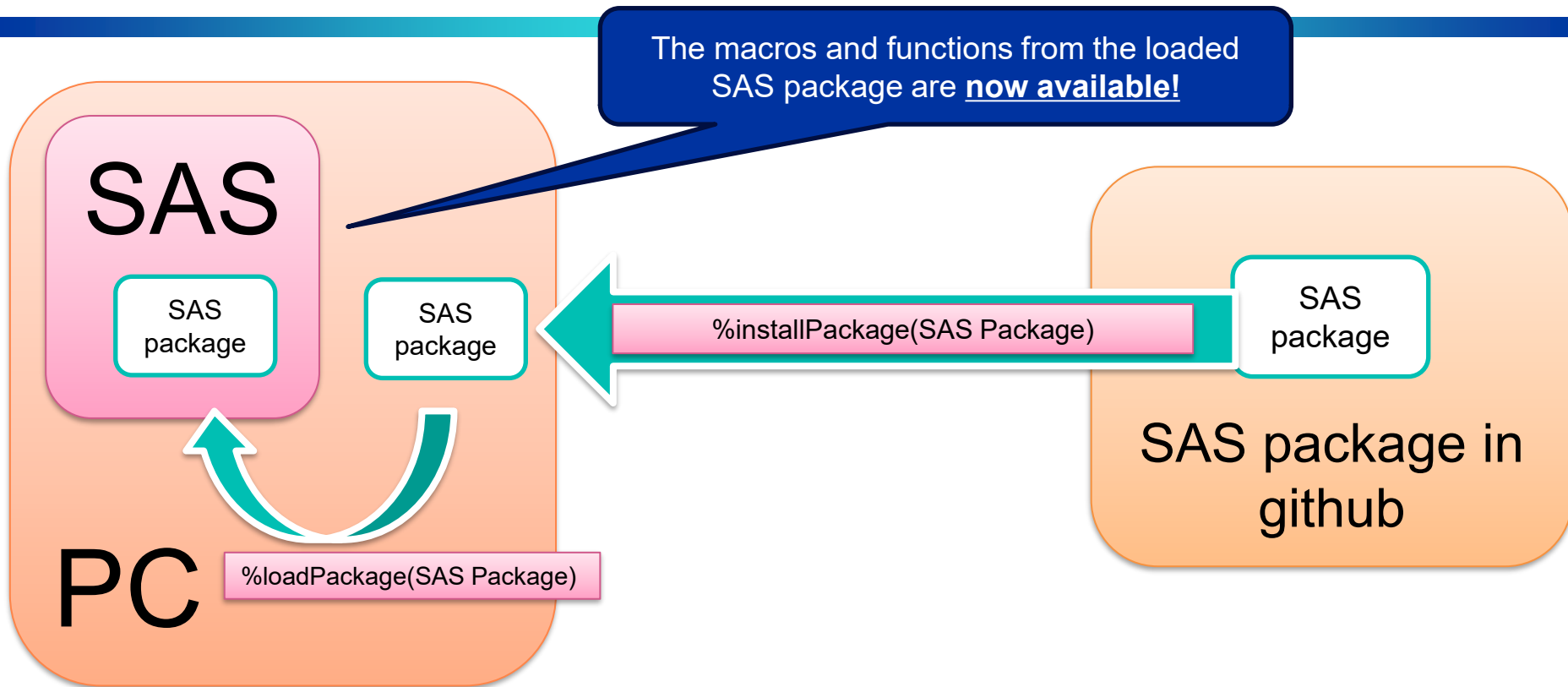


SAS packages are structured as ZIP files that store the code.
(include SAS macro, function, format, etc)



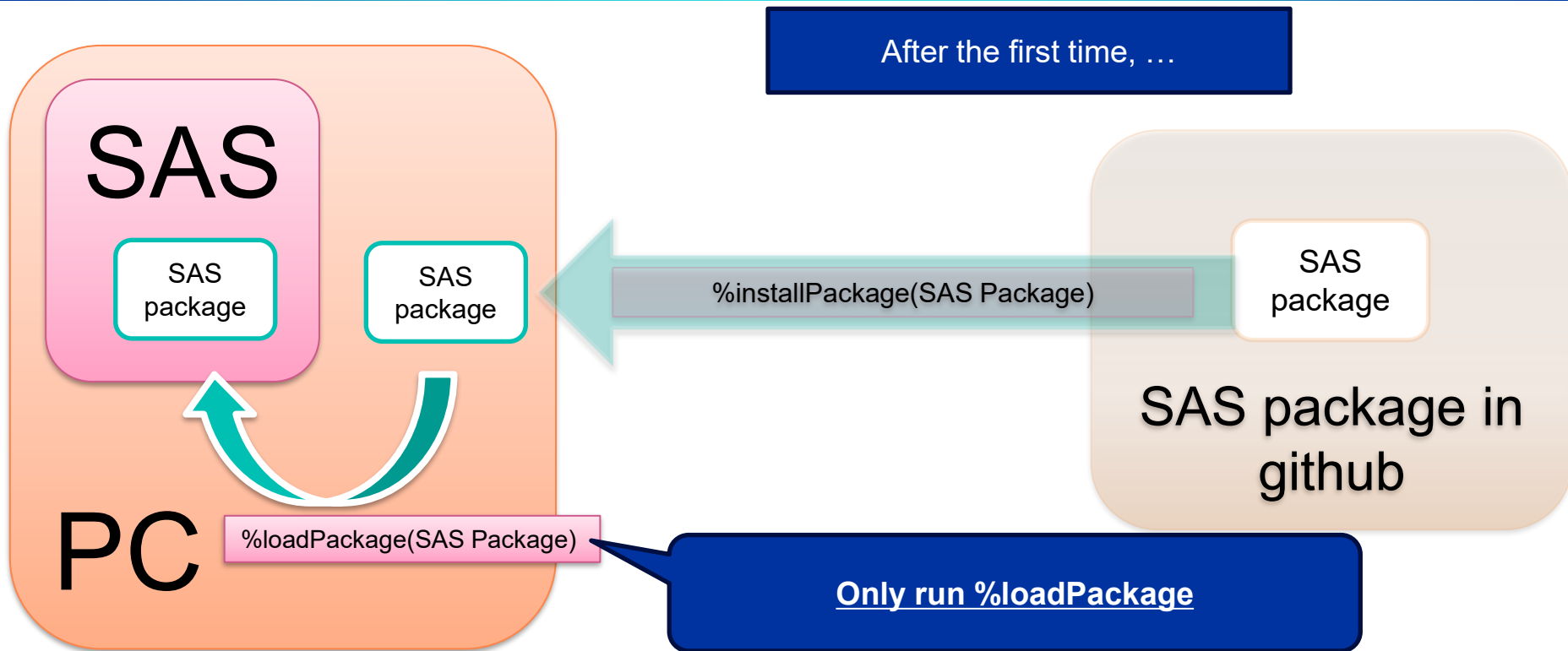


How SPF_(SAS Package Framework) Work





How SPF_(SAS Package Framework) Work





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PharmaForest





PharmaForest

Phuse Japan OST: SAS Package sub-team:
Member: Ryo Nakaya, Yutaka Morioka, Hiroki Yamanobe

- What's PharmaForest?

**Shared
Repository**

for SAS Packages
for Drug
Development

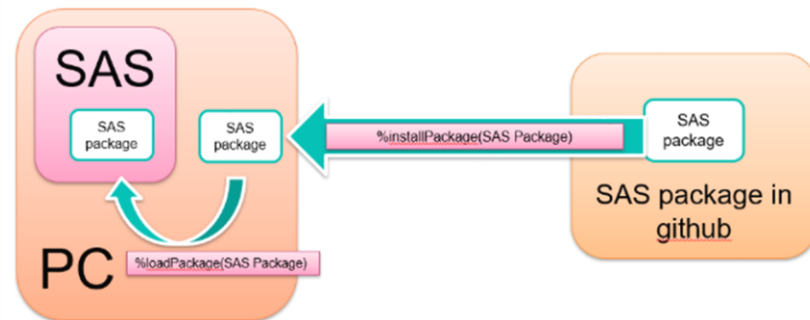
**Founded
by Members of
PHUSE
Japan OST**



**Community
-Created
Packages
are Stored**

**Can be
Used
through **SPF****

How SPF (SAS Package Framework) Work




To Use [OncoPlotter] package within PharmaForest,
in an Environment with SPF (SAS Package Framework) Installed:

```
%installPackage(OncoPlotter, mirror=PharmaForest)  
%loadPackage(OncoPlotter)
```



PharmaForest

Platform ▾ Solutions ▾ Resources ▾ Open Source ▾ Enterprise ▾ Pricing



 PharmaForest

Overview Repositories 33 Projects Packages People

README.md

PharmaForest (we have already 30 packages 🎉🎉)

A collaborative repository of SAS packages for pharmaceutical industry, powered by PHUSE Japan OST (Open Source Technology) WG members—Hiroki Yamanobe, Yutaka Morioka, and Ryo Nakaya—showcasing the list of available packages below. Click the QR code to visit gallery page.

[PharmaForest Gallery](#)

-Goal-

Through SAS Packages, we want to actively encourage sharing of SAS know-how that has often stayed within individuals. By doing this, we aim to build up collective knowledge, boost productivity, secure quality through standardization, and increase

- PharmaForest is available on [GitHub](#)
- Contains all available packages
 - Provides links to each package
 - Introduction to the Navigator (later mentioned)
 - Includes clear usage instructions



PharmaForest

› Packages

#	Package	#	Package	#
1	OncoPlotter (PharmaForest original package)	16	maxims4sas (PharmaForest original package)	31
2	sashash	17	laglead	32
3	sas_dataset_json	18	ctcae5_grader	33
4	SASPACer	19	love_matrix	34
5	misc (PharmaForest original package)	20	SASPACerShiny (R Package)	35
6	SAS FAKER	21	change_tracer_dog	36
7	SASLogChecker	22	yaml_writer	37
8	sas_compare	23	Adamski (PharmaForest original package)	38
9	rtfCreator	24	RWDEExpress	39
10	shutter_chance	25	freqsum	40
11	devil (PharmaForest original package)	26	qc_cat_referee	41
12	xattr_kit	27	SASToolbox	42
13	cloak	28	trial_flow	43
14	vis_review_kit	29	valivali (PharmaForest original package)	44
15	odstable_layoutshowcase	30	mergex	45

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PharmaForest



Master Navigator(Beta version) [Dr. Forest link](#)

Dr. Forest is a master navigator of PharmaForest. He is an excellent and diligent GPT assistant who can answer most questions about PharmaForest and details of #1-#15 packages. However, please understand that he is not speaking on behalf of our organization. You need to sign up to ChatGPT (at least a free user account) to talk to him. See more about [his background](#).



Support Navigator(Beta version) [Dr. Apple link](#)

Dr. Apple is a support navigator of PharmaForest. He has a strong character but cool GPT assistant who can answer details of #16 - #30 packages. Please understand that he is not speaking on behalf of our organization. You need to sign up to ChatGPT (at least a free user account) to talk to him. See more about [his background](#).



Support Navigator(Beta version) [Rio link](#)

Rio is a support navigator of PharmaForest. She/He is a mysterious GPT assistant who can answer details of #31 and later packages. Please understand that she/he is not speaking on behalf of our organization. You need to sign up to ChatGPT (at least a free user account) to talk to her/him. See more about [her/his background](#).



SAS Package Lady (Oba-chan) (Beta version) [SAS Package Lady link](#)

SAS Package Lady (Oba-chan) is a warm diner-auntie GPT persona who helps you create SAS packages. Please understand that she is not speaking on behalf of our organization. You need to sign up to ChatGPT (at least a free user account) to talk to her.

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 - Provides links to each package
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PharmaForest

What is SAS Packages?

The package is built on top of **SAS Packages Framework(SPF)** developed by Bartosz Jablonski.

For more information about the framework, see [SAS Packages Framework](#).

You can also find more SAS Packages (SASPacs) in the [SAS Packages Archive\(SASPAC\)](#).

How to use SAS Packages? (quick start)

1. Set-up SAS Packages Framework

First, create a directory for your packages and assign a `packages` fileref to it.

```
filename packages "&path\to\your\packages";
```

Secondly, enable the SAS Packages Framework. (If you don't have SAS Packages Framework installed, follow [SPF documentation](#) to install SAS Packages Framework.)

```
%include packages(SPFinit.sas)
```

2. Install SAS package

PharmaForest is available on GitHub

Contains all available packages

- Provides links to each package
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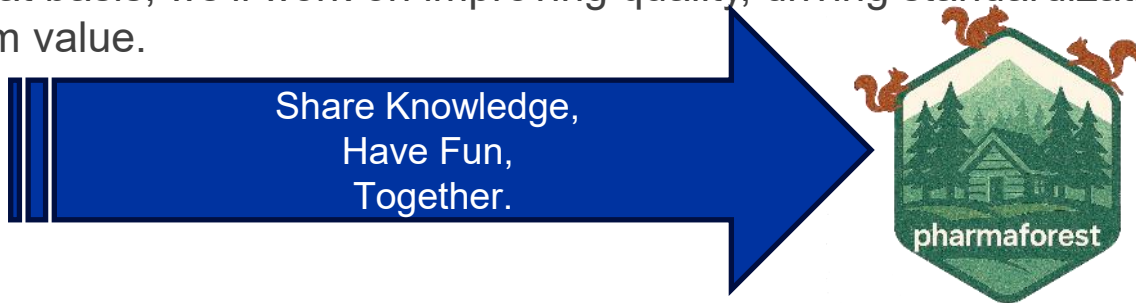
PharmaForest

► Goal

Through SAS Packages, we want to actively encourage sharing of SAS know-how that has often stayed within individuals. By doing this, we aim to build up collective knowledge, boost productivity, ensure quality through standardization, and energize our community.

► Priority

Our first priority is to share openly—and get others to share as well—so that more people can join in. On that basis, we'll work on improving quality, driving standardization, and creating long-term value.





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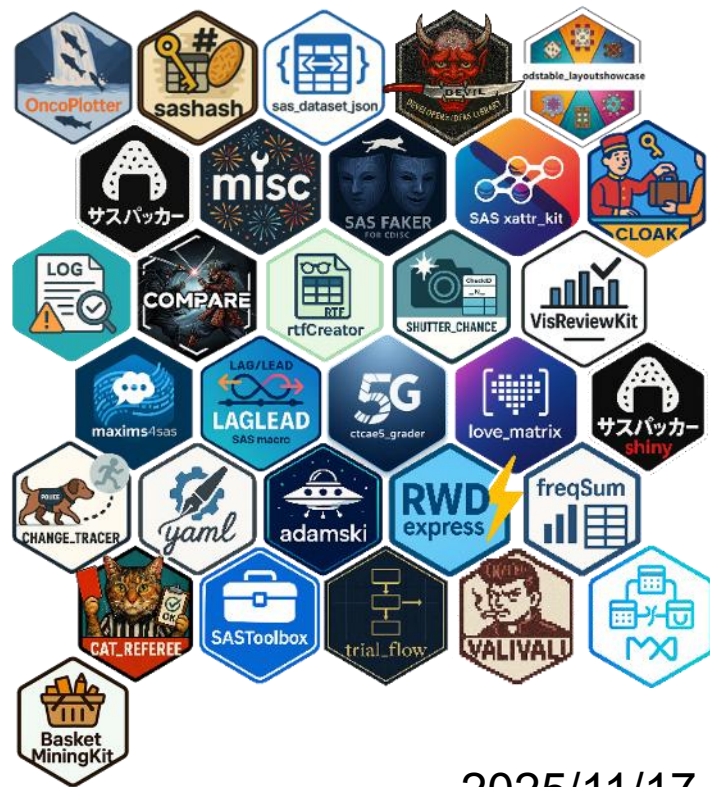
Packages





Packages

#	Package	#	Package	#	Package
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11	devil (PharmaForest original package)	26	qc_cat_referee	41	
12	xattr_kit	27	SASToolbox	42	
13	cloak	28	trial_flow	43	
14	vis_review_kit	29	valivali (PharmaForest original package)	44	
15	odstable lavoutshowcase	30	meraex	45	





PharmaForest Ecosystem Map

Output / Visualization



Other



Checker



Data Utility





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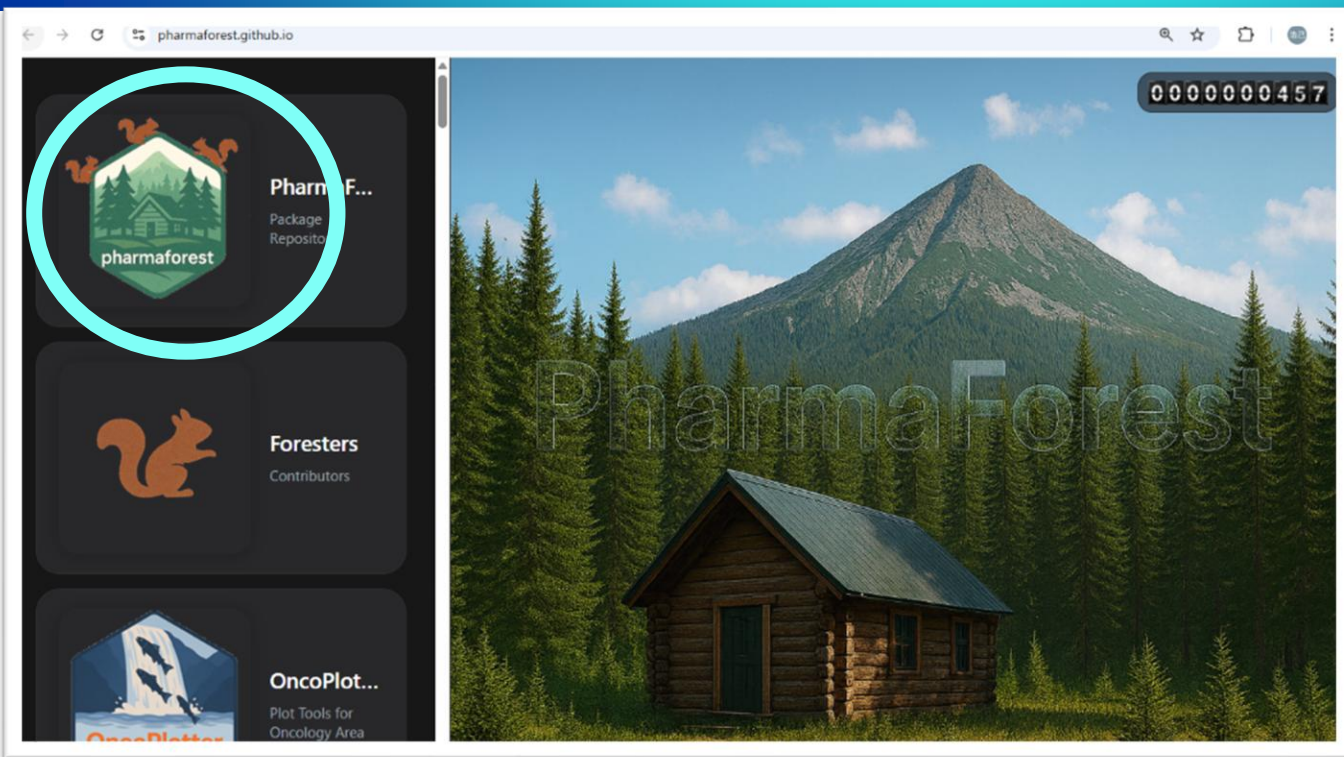
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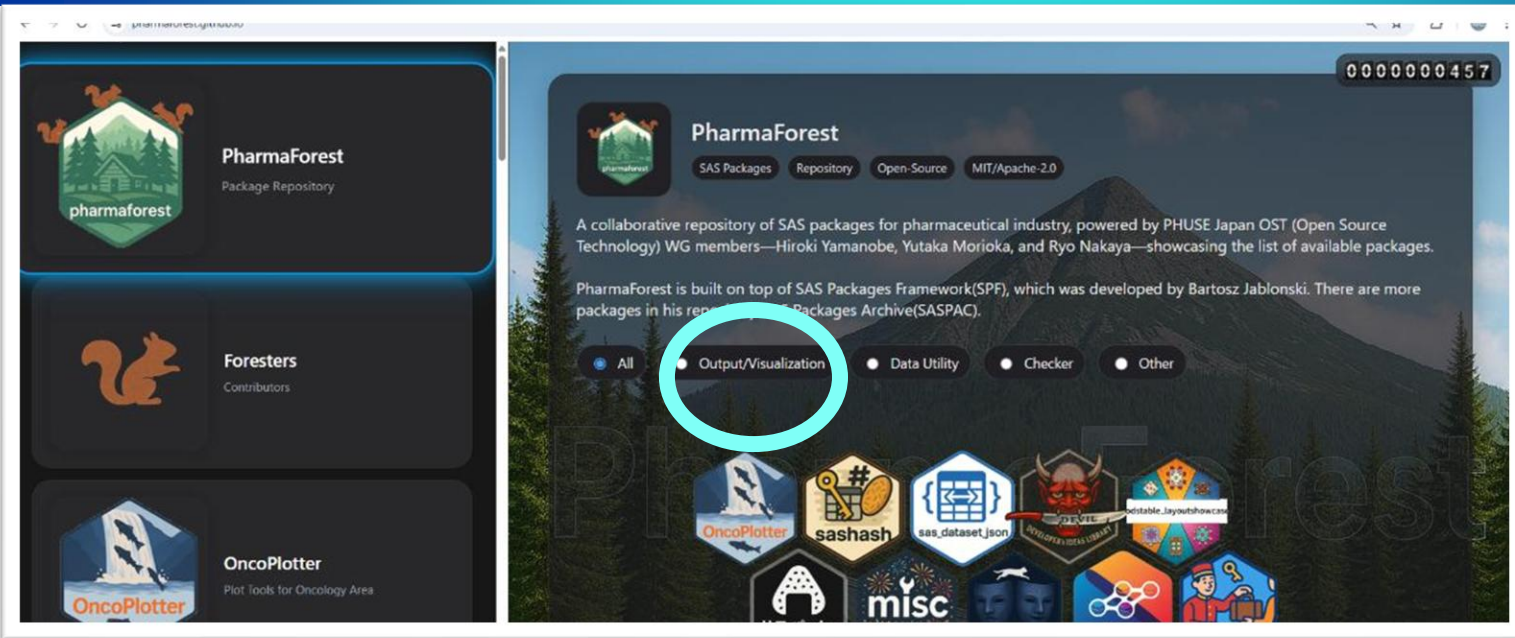
PharmaForest Gallery



<https://pharmaforest.github.io/>



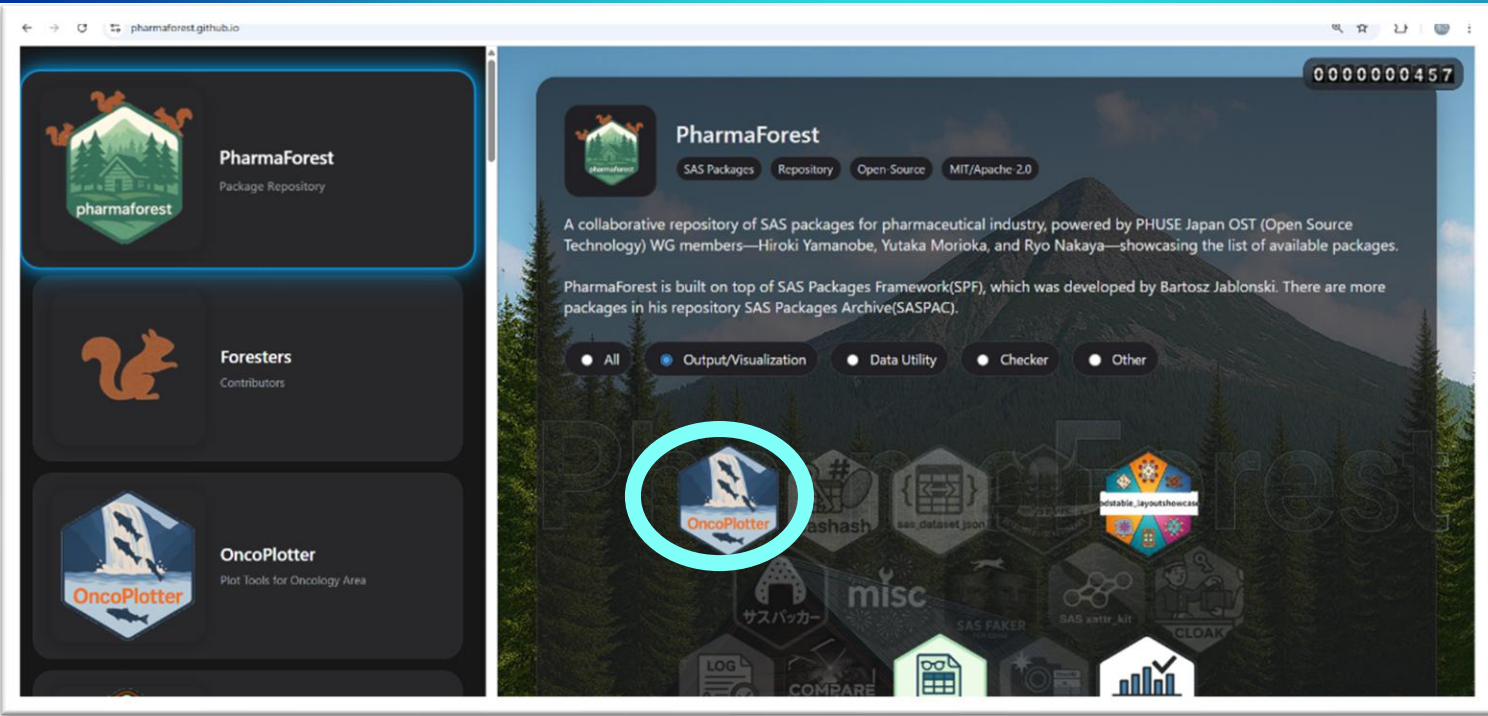
PharmaForest Gallery



<https://pharmaforest.github.io/>



PharmaForest Gallery



<https://pharmaforest.github.io/>




PharmaForest Gallery

[README](#)

OncoPlotter (Latest version 0.3.7 on 29October2025)

A SAS package to create figures commonly created in oncology studies



The repository is a collaborative project.

- %kaplan_meier_plot
- %swimmer_plot
- %waterfall_plot

%kaplan_meier_plot

Macro: %kaplan_meier_plot




Purpose: This macro generates Kaplan-Meier survival plots using PROC LIFETEST in SAS.

[+ 2 Forks](#)

Packages

No packages published

Contributors 3

-  Nakaya-Ryo NAKAYA-Ryo
-  Morioka-Yutaka Morioka-Yutaka
-  stainlessfish

Languages

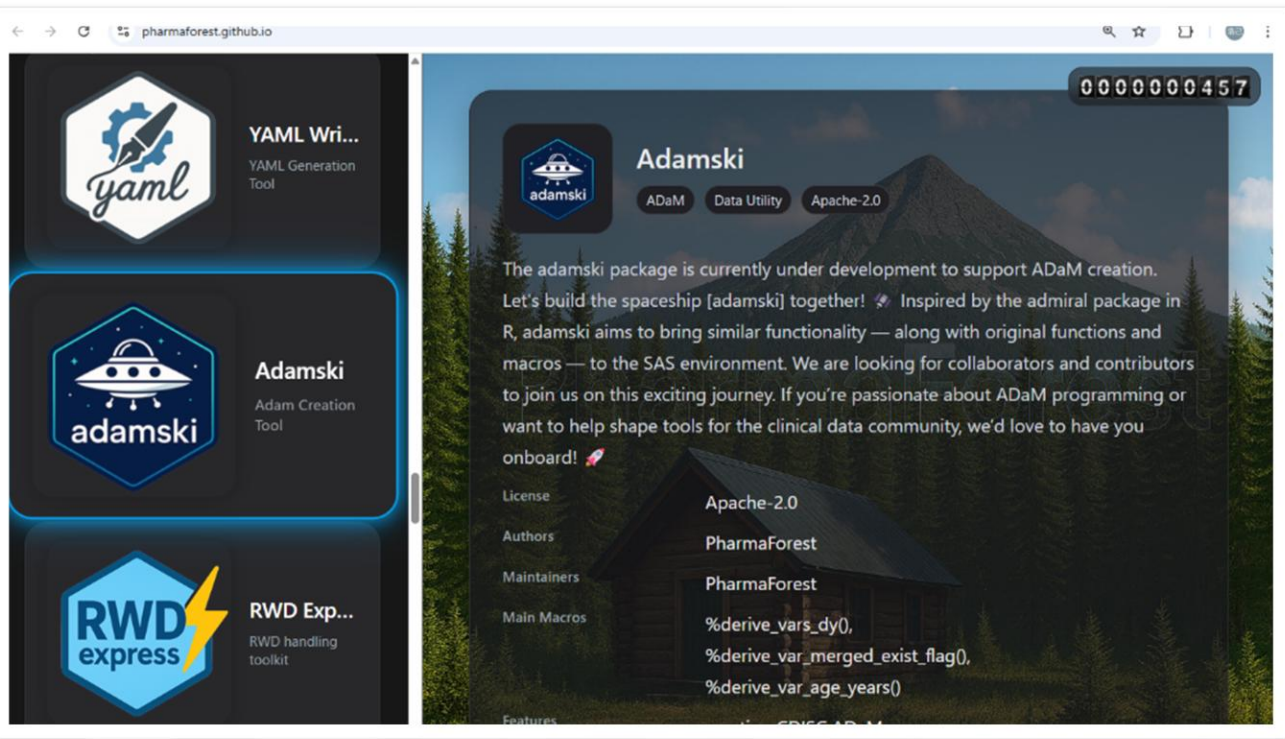
SAS 100.0%



<https://pharmaforest.github.io/>



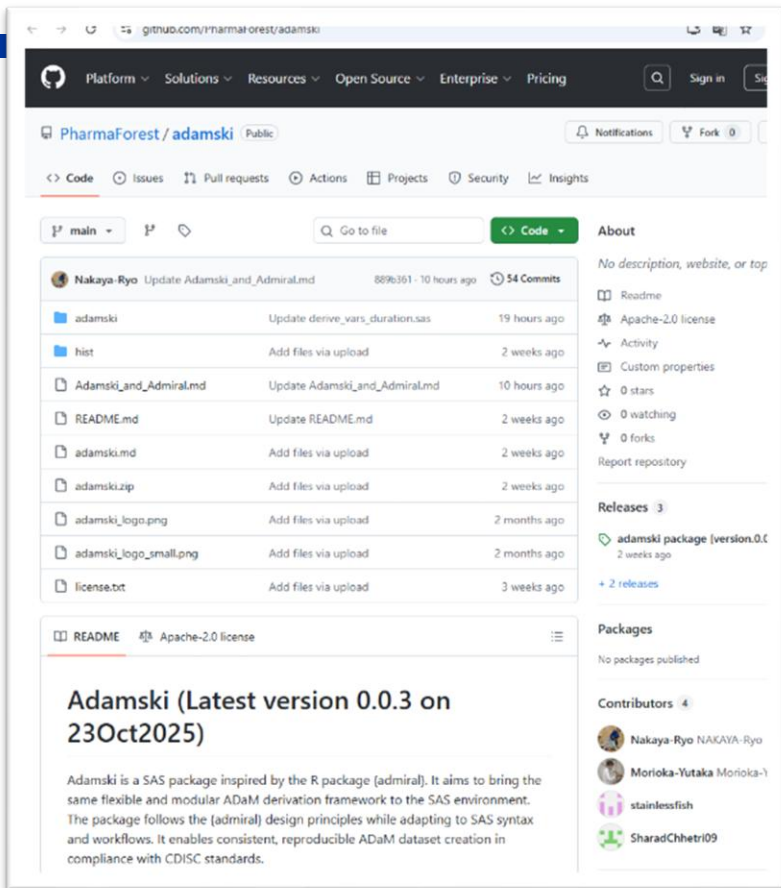
PharmaForest Gallery



<https://pharmaforest.github.io/>



PharmaForest Gallery



Overview, usage instructions, version information, and other details are listed on each package page.





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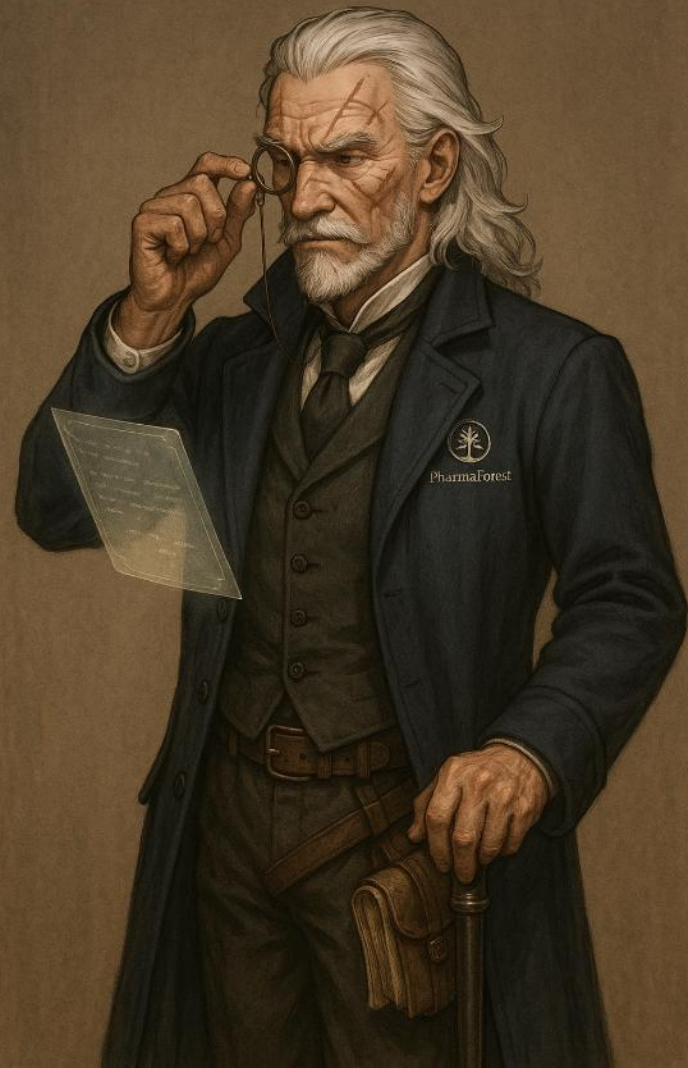
- Forest Navigator is a custom AI that guides you through package navigation. (Beta Ver)
 - Dr. Forest: Master navigator
 - Dr. Apple: Support navigator
 - Rio: Support navigator
 - SAS Package Lady: SAS Package creation supporter
- They are navigators built with MyGPT_(OpenAI), so you can ask them anything freely.
- Please understand that they are not speaking on behalf of our organization.





Forest Navigator

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Forest Navigator

Dr. Forest 40 ▾



How can I create a Kaplan-Meier curve?

To create a **Kaplan-Meier curve** using PharmaForest tools, the recommended package is **OncoPlotter**, which is PharmaForest's original visualization tool designed for clinical trial datasets, particularly in oncology.

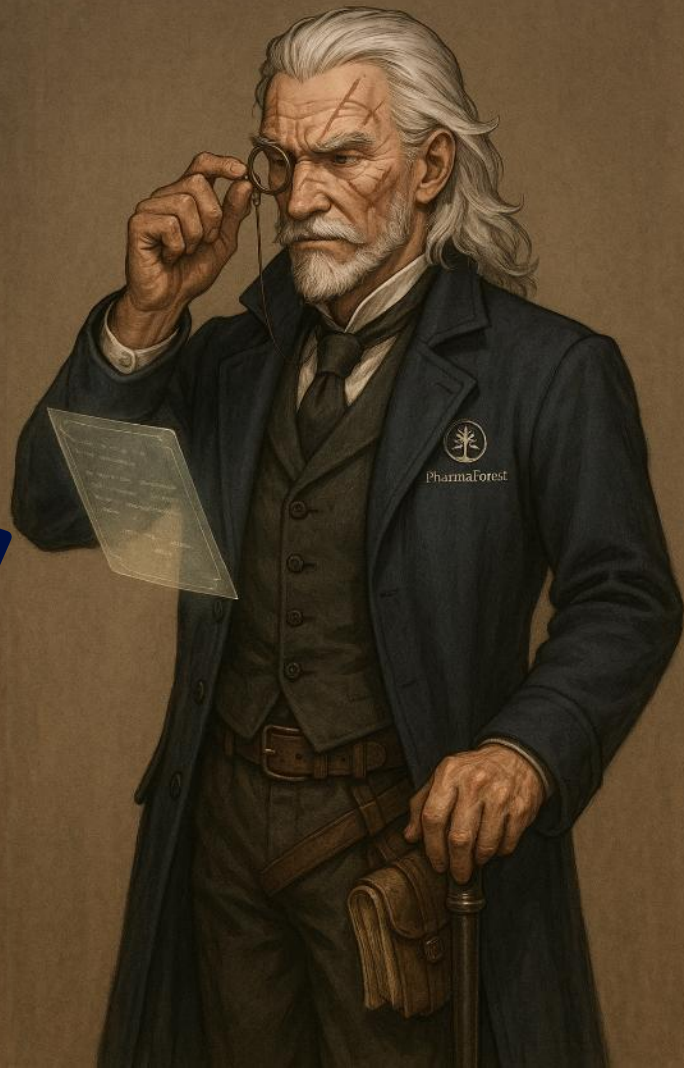
Here is how you can create a **Kaplan-Meier (KM) curve** using **OncoPlotter**:

■ Step-by-Step Guide to Creating a KM Curve with OncoPlotter

🔧 Step 1: Prepare Your Data

You'll need a dataset with at least the following columns:

- **TIME** : Time to event or censoring
- **STATUS** : Event occurrence (e.g., 1 = event, 0 = censored)
- **GROUP** (optional): If you want to compare KM curves between groups





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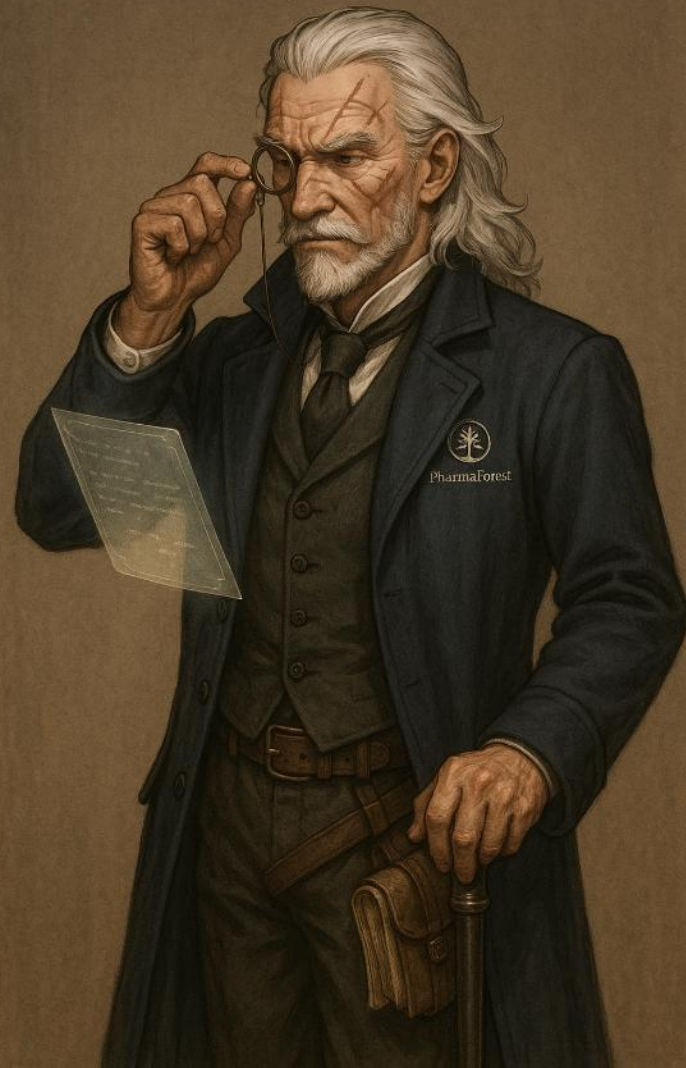
- Dr. Apple: Support navigator

- Rio: Support navigator

- SAS Package Lady: SAS Package creation supporter

A cartoon illustration of a man with dark hair, wearing a blue suit and tie, sitting at a desk with his hand on his chin, looking thoughtful.

I understand which package to use. Could you also show me how to use it? Do you have an example?





Forest Navigator

Ah, splendid — you already know which package to use.

Then let old Morio Forest walk beside you and show you *exactly* how to use `%kaplan_meier_plot` from **OncoPlotter**.

Everything below comes *directly* from the official OncoPlotter README

(I shall not invent anything beyond that)

🌲 1. The simplest example — just run it

If you want a KM plot immediately, with no setup:

```
sas

%kaplan_meier_plot();
```

What this does:

- Creates an internal dummy dataset (`dummy_adtte`)
- Draws a full Kaplan–Meier curve with:
 - survival curves
 - censor marks
 - number-at-risk table
- Opens the underlying SAS code as text

It is the cleanest, fastest way to generate a KM curve.

🌲 2. Example using your own dataset

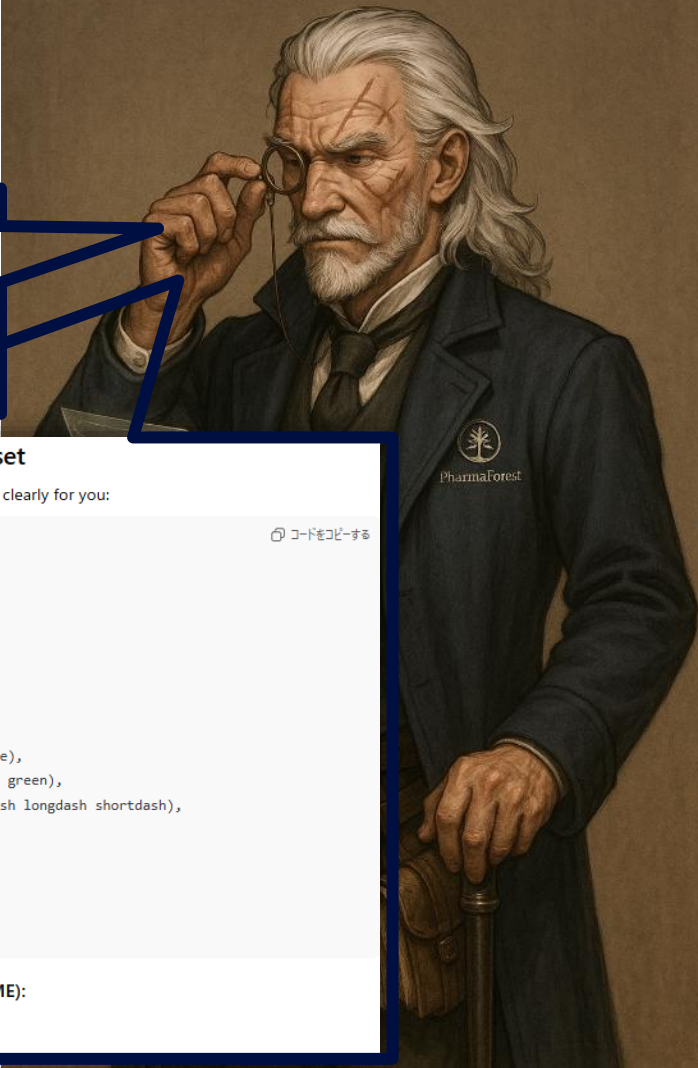
Here is the official example from the README, rewritten clearly for you:

```
sas 📄 コードをコピーする

%kaplan_meier_plot(
  data = dummy_adtte,
  groupn = TRTPN,
  groupc = TRTP,
  Time_var = AVAL,
  Censore_var = CNSR,
  Censore_val = 1,
  Title = %nrquote(Kaplan-Meier Curve Example),
  Group_color_list = %nrquote(black red blue green),
  Group_linepattern_list = %nrquote(solid dash longdash shortdash),
  XLABEL = %nrquote(Survival Time (Month)),
  YLABEL = %nrquote(Probability),
  AxisValues = %nrquote(0 to 15 by 1),
  Generate_Code = N
);
```

Meaning of each parameter (all from the README):

- `data` — your input dataset
- `groupn` — numeric treatment group





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Dr. Apple can answer questions about packages No.16–30.

Rio can answer questions about packages No.31 and above.



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Please called her “Oba-chan”. (a friendly Japanese term for an older woman)

A tool that supports SAS package creation.

By providing your own code and entering the required information, Navigator guides you through the process of creating a SAS package.



How Can I Create My Own SAS Package?



Hello dear~, SAS Package Lady (オバちゃん) やけんね 😊

ご質問は「How can I create my own SAS package?」やね。英語で答えるばってん、やさしく説明するけん安心してね。

がんばってね〜 🍡 ✨

🌟 How You Can Create Your Own SAS Package

To create your own SAS package, you will follow a simple workflow using the **SAS Packages Framework (SPF)**. The steps are the same whether you're packaging macros, formats, FCMP functions, datasets, or IML modules.

Here's the big picture:

✅ Step 1 — Prepare Your Package Folder

Create a dedicated folder where your package source will live.

For example:

```
bash
```

```
C:/saspackages/MyPackage
```

This folder will contain:

- `description.sas` (package metadata)
- `license.sas` (license text)
- Subfolders like `001_libname`, `002_macro`, `003_formats`, etc.
- Your SAS content split into individual files

Easy create SAS
Package!





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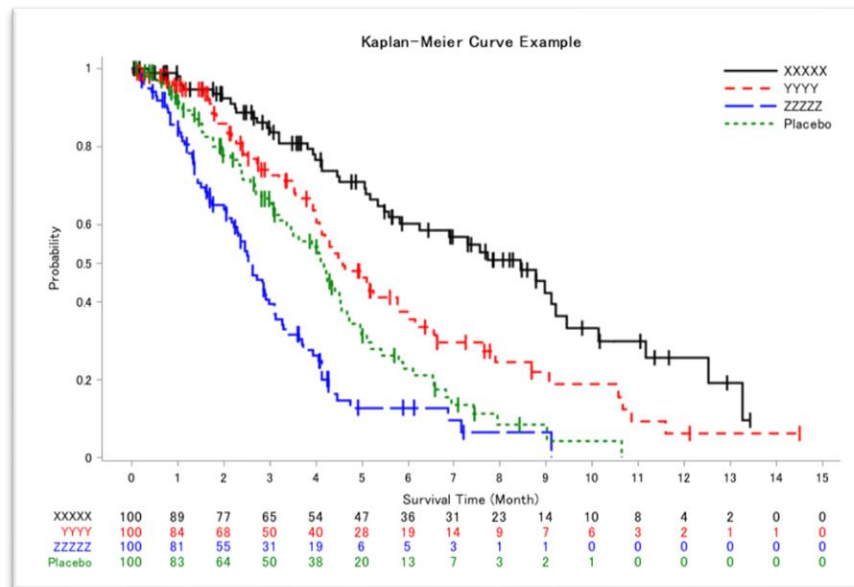


Let's try - How to use



Let's try - How to use

- How to using:
 - Set SPF
 - Install SAS package(OncoPlotter)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package





Let's try - How to use

- How to using:
 - [Set SPF](#)
 - Install SAS package(OncoPlotter)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package

```
filename packages "C:¥Temp¥SAS_PACKAGES¥packages";  
filename SPFinity url "https://raw.githubusercontent.com/yabwon/SAS_PACKAGES/main/SPF/SPFinity.sas";  
%include SPFinity;  
%installPackage(SPFinity)
```



Let's try - How to use

- How to using:
 - Set SPF
 - Install SAS package(OncoPlotter)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package

When using SPF, you need to set Filename packages as the storage location for SAS packages.

```
filename packages "C:¥Temp¥SAS_PACKAGES¥packages";  
filename SPFinit url "https://raw.githubusercontent.com/yabwon/SAS_PACKAGES/main/SPF/SPFinit.sas";  
%include SPFinit;  
%installPackage(SPFinit)
```



Let's try - How to use

- How to using:
 - Set SPF
 - Install SAS package(OncoPlotter)
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Only the first time, you must install SPFinIt.

From the second time onward, only [filename packages]+[%include SPFinIt]

```
filename packages "C:¥Temp¥SAS_PACKAGES¥packages";  
%include packages (SPFinIt);
```

```
filename packages "C:¥Temp¥SAS_PACKAGES¥packages";  
filename SPFinIt url "https://raw.githubusercontent.com/yabwon/SAS_PACKAGES/main/SPF/SPFinIt.sas";  
%include SPFinIt;  
%installPackage(SPFinIt)
```



Let's try - How to use

- How to using:
 - Set SPF
 - [Install SAS package\(OncoPlotter\)](#)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package

%installPackage is a macro in SPF.

It installs (ダウンロード) the SAS package OncoPlotter into the [packages] folder.

```
** install SAS Package;
```

```
%installPackage(oncoplotter,    sourcePath=https://github.com/PharmaForest/OncoPlotter/raw/main/)
```



Let's try - How to use

- How to using:
 - Set SPF
 - Install SAS package(OncoPlotter)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package

%installPackage is a macro in SPF.

It installs (ダウンロード) the SAS package OncoPlotter into the [packages] folder.

When referring to PharmaForest, you can use the shorthand mirror=PharmaForest.

```
%installPackage(OncoPlotter, mirror=PharmaForest)
```

```
** install SAS Package;
```

```
%installPackage(oncoplotter, sourcePath=https://github.com/PharmaForest/OncoPlotter/raw/main/)
```



Let's try - How to use

- How to using:
 - Set SPF
 - Install SAS package(OncoPlotter)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package

%loadPackage is a macro in SPF.
It loads the SAS package OncoPlotter from the [packages] folder.

```
** load SAS Package;  
%loadPackage(oncoplotter)
```




Let's try - How to use

- How to using:
 - Set SPF
 - Install SAS package(OncoPlotter)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package

Execute a macro inside the SAS package(**OncoPlotter**).

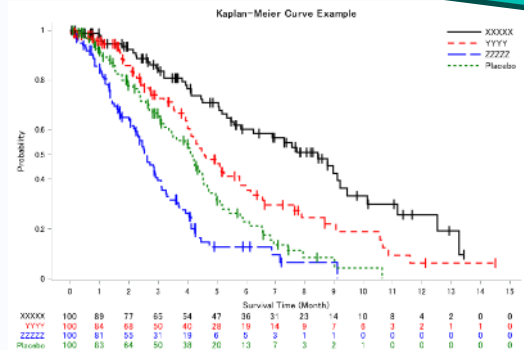
```
** KM plot;  
%kaplan_meier_plot(  
  data = dummy_adtte,  
  groupn = TRTPN,  
  groupc = TRTP,  
  Time_var = AVAL,  
  Censore_var = CNSR,  
  Censore_val = 1,  
  Title = %nrquote(Kaplan-Meier Curve Example),  
  Group_color_list = %nrquote(black red blue green),  
  Group_linepattern_list = %nrquote(solid dash longdash shortdash),  
  XLABEL = %nrquote(Survival Time (Month)),  
  YLABEL = %nrquote(Probability),  
  AxisValues = %nrquote(0 to 15 by 1),  
  Generate_Code = N  
);
```



Let's try - How to use

- How to using:
 - Set SPF
 - Install SAS package(OncoPlotter)
 - Load SAS package(OncoPlotter)
 - Run macro(or format, function) in SAS package

Execute a macro inside the SAS package(OncoPlotter).



```
** KM plot;  
%kaplan_meier_plot(  
data = dummy_adtte,  
groupn = TRTPN,  
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AxisValues = %nrquote(0 to 15 by 1),  
Generate_Code = N  
);
```

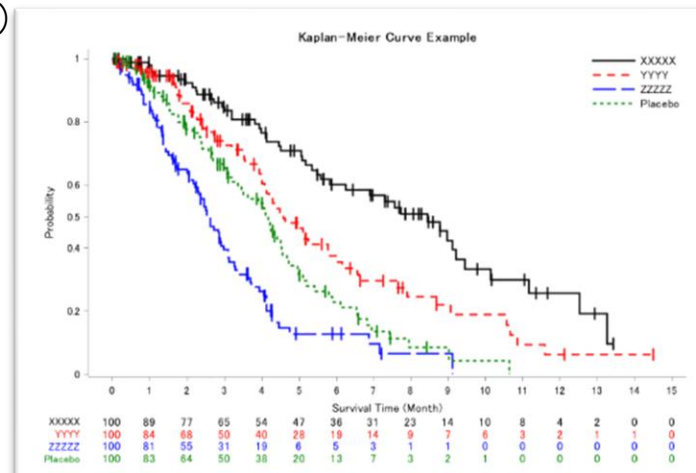


Let's try - How to use

```
** set SPF;  
filename packages "C:\Temp\SAS_PACKAGES\packages";  
filename SPFinet url "https://raw.githubusercontent.com/yabwon/SAS_PACKAGES/main/SPF/SPFinet.sas";  
%include SPFinet;  
%installPackage(SPFinet)  
  
** install SAS Package;  
%installPackage(oncoplotter,  
sourcePath=https://github.com/PharmaForest/OncoPlotter/raw/main/)  
  
** load SAS Package;  
%loadPackage(oncoplotter)
```

** KM plot;

```
%kaplan_meier_plot(  
data = dummy_adtte,  
groupn = TRTPN,  
groupo = TRTP,  
Time_var = AVAL,  
Censore_var = CNSR,  
Censore_val = 1,  
Title = %nrquote(Kaplan-Meier Curve Example),  
Group_color_list = %nrquote(black red blue green),  
Group_linepattern_list = %nrquote(solid dash longdash shortdash),  
XLABEL = %nrquote(Survival Time (Month)),  
YLABEL = %nrquote(Probability),  
AxisValues = %nrquote(0 to 15 by 1),  
Generate_Code = N  
);
```





Agenda

How to Share SAS Code?

How SPF(SAS Package Framework) Work

PharmaForest

Packages

PharmaForest Gallery

Forest Navigator

Let's try - How to use

Community





Community

- Activities Centered Around the LinkedIn Group **SAS Packages Users & Developers**
<https://www.linkedin.com/groups/10149811/>
 - LinkedIn Group Members: 387 (2025/11/17)
 - PharmaForest introduction post: Over 7,500 impressions
 - Global participation: Many users from around the world, including Japan
 - Group administrators:
 - Bartosz Jabłoński
 - Ryo Nakaya
 - Yutaka Morioka
 - Hiroki Yamanobe





Community

- You can get involved with PharmaForest in many ways! We're looking for users!
 - Use → Feel free to use it anytime!
 - Develop package → Let's create original packages together!
 - Provide → Mirror your own packages to PharmaForest!
 - Try → Share fun or lightweight programs in the "Devil" package area!
 - Feedback → Report bugs or request new features!
 - Join the community → Join our LinkedIn group [SAS Packages Users & Developers] to stay updated!



Thank you for your attention.





References

SAS Packages Framework

https://github.com/yabwon/SAS_PACKAGES

PharmaForest

<https://github.com/PharmaForest/>

SAS Packages Users & Developers [Linkedin]

<https://www.linkedin.com/groups/10149811/>

Image

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