

## First-line antiretroviral therapies in HIV-infected patients in Germany:

## Treatment decisions in the PROPHET study

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## Objectives

The PROPHET study evaluates pharmacoeconomic and clinical outcomes of first-line antiretroviral treatment (ART) strategies that are recommended by current treatment guidelines in Germany. Reasons for individual regimen choices are also investigated.

## Methods

PROPHET is an ongoing, nation-wide, prospective, observational study in ART-naïve HIV-infected patients initiating ART. Patient follow-up is 24 months.

## Inclusion criteria

- Age ≥18 years
- ART-naïve (no acute HIV-infection)
- ART initiation with 2 NRTI (TDF/FTC or ABC/3TC) plus a 3<sup>rd</sup> agent, namely an integrase inhibitor (INI arm), a boosted protease inhibitor (PI arm) or a non-nucleoside reverse transcriptase inhibitor (NNRTI arm).

The planned study size for the non-randomized, three-arm design comprises 3x 160 patients.

## Variables of the eCRF (electronic case report form)

- Socio-demographics, clinical routine parameters, comorbidities, adverse events
- Antiretroviral therapy and reasons for the choice of the initial treatment
- Concomitant medication
- Health-related quality of life using the following questionnaires: HADS (Hospital Anxiety and Depression Scale), ASDM (ACTG symptom distress module), SF-12 (short form of SF-36 Health Survey)
- Health economic variables (such as outpatient visits to the specialist or general practitioner, drug prescriptions other than ART, sick leaves and disability, hospitalizations)

## Results

Patient enrollment started in August 2014. As of 04 September 2015, 407 patients have been enrolled by 24 centers.

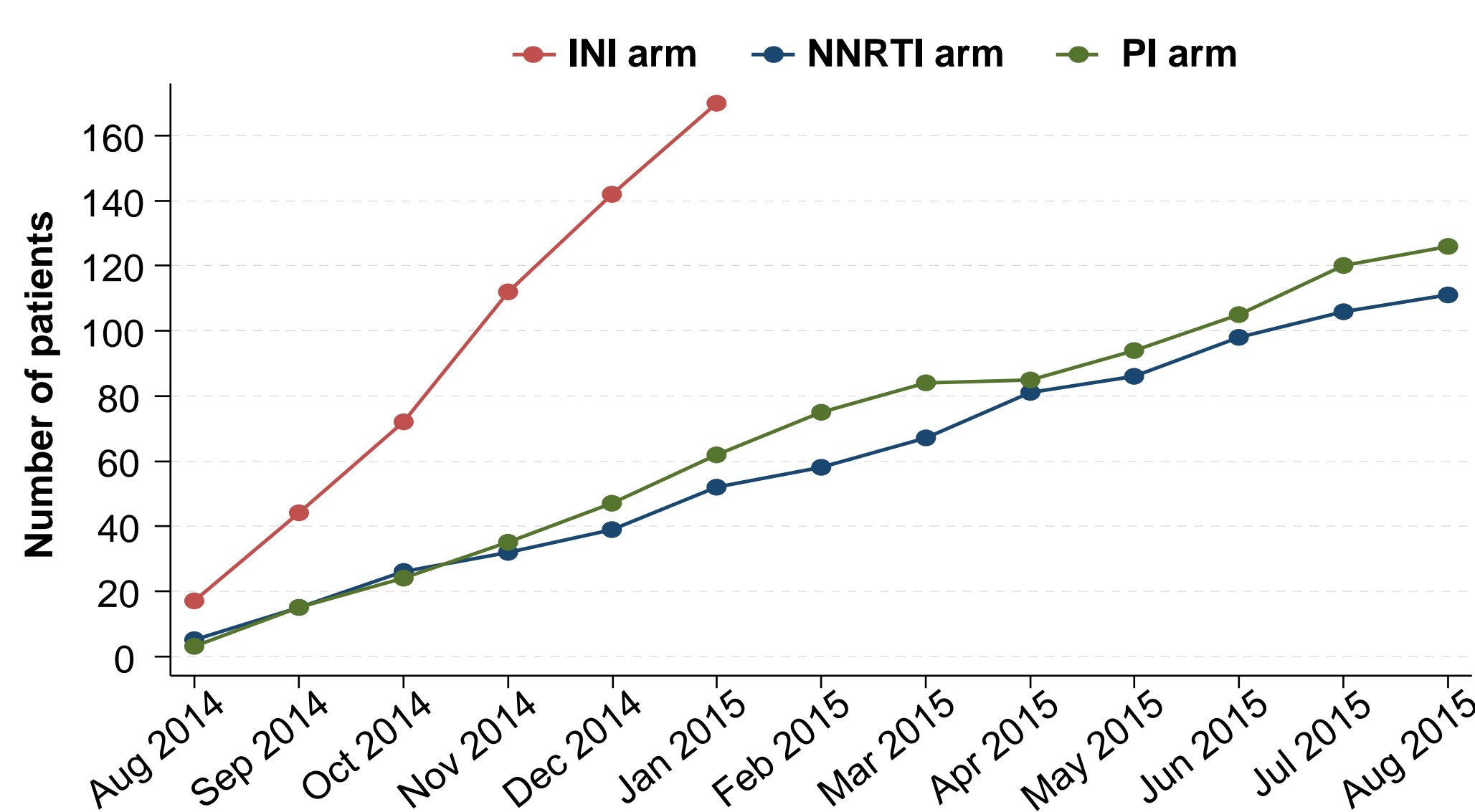


Figure 1: Patient enrollment

## Study population: Socio-demographics

Table 1: Socio-demographic characteristics at baseline

	Total	INI	NNRTI	PI
<b>N</b>	407	170	111	126
<b>Age [years];</b> Median [IQR*] (Range)	39 [31-48] (18-76)	42 [31-49] (18-75)	37 [30-46] (19-56)	39 [30-50] (20-76)
<b>Sex: female; N (%)</b>	36 (8.9)	11 (6.5)	12 (10.8)	13 (10.3)
<b>Ethnicity: Caucasian; N (%)</b>	360 (88.5)	158 (92.9)	96 (86.5)	106 (84.1)
<b>HIV transmission risk; N (%)</b>				
MSM	315 (77.4)	144 (84.7)	82 (73.9)	89 (70.6)
Heterosexual	43 (10.6)	13 (7.7)	12 (10.8)	18 (14.3)

\*IQR: interquartile range

## Acknowledgment

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## Initial ART and reasons for treatment choice

- Most common initial combinations were ABC/3TC+DTG (50% of INI arm), TDF/FTC+DTG (34% of INI arm), TDF/FTC+RPV (94% of NNRTI arm), and TDF/FTC+DRV/rit (86% of PI arm).
- Among 17 predefined reasons for treatment choice, physicians were asked to select up to 5 using weights from 5 (primary reason) to 1 (minor reason).
- The primary reasons were as follows: INI arm: 'high HIV-RNA level' (17.1%), 'simplicity' (16.5%) and 'tolerability' (15.9%); NNRTI arm: 'simplicity' (36.9%), 'tolerability' (18.9%) and 'low pill count' (13.5%); PI arm: 'high HIV-RNA level' (35.7%), 'high resistance barrier' (23.0%) and 'low CD4 count' (14.3%).
- Figure 2 shows the sum scores normalized to a population of N=100 per study arm.

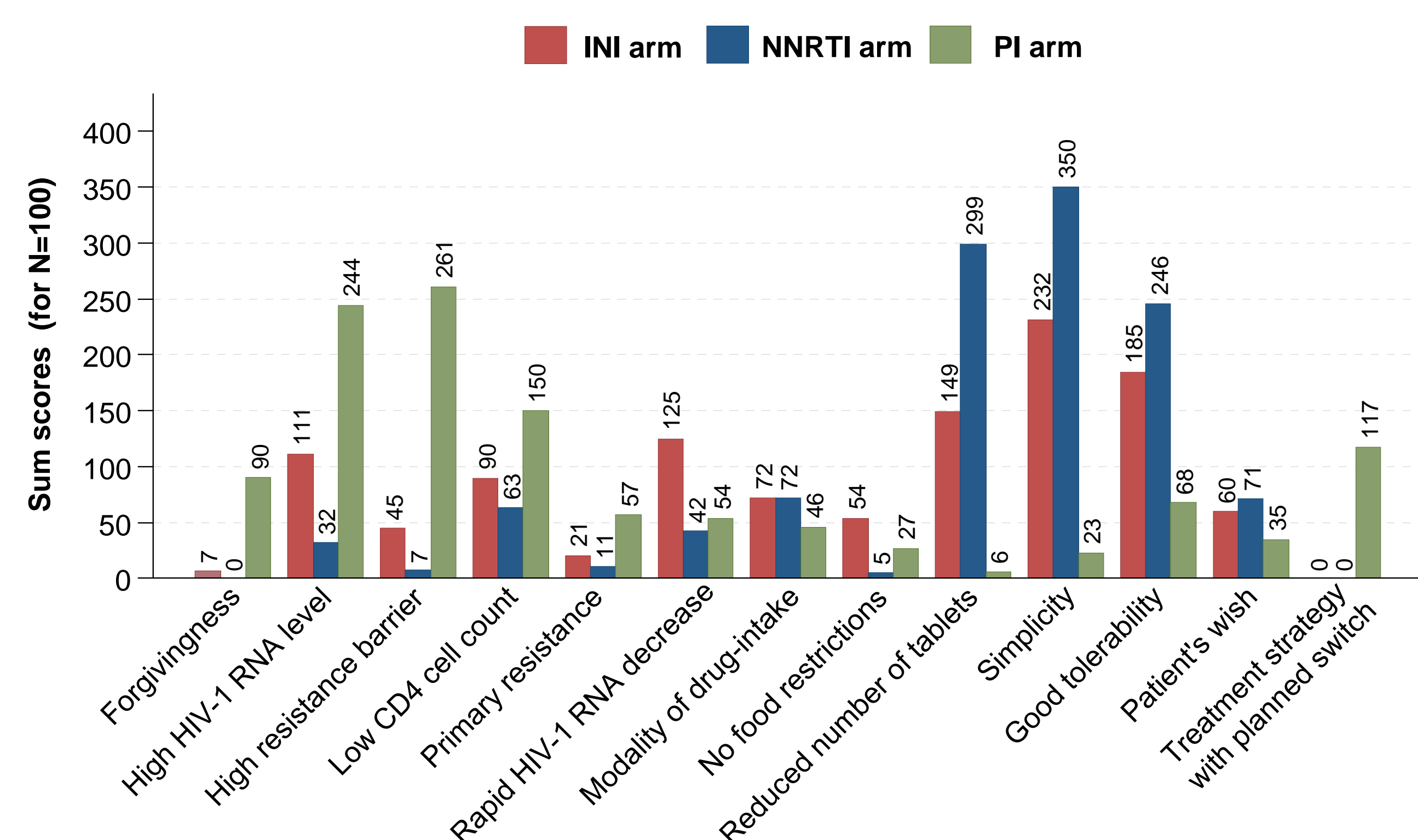


Figure 2: Reasons for treatment choice and sum scores

Sum scores are normalized to a population of N=100 per study arm; reasons with a sum score <50 in the 3 study arms are not shown (i.e. attractive price, comorbidities, absence of interaction with comedication).

## Immunologic and virologic baseline characteristics

We observed significant differences between treatment arms with respect to baseline CD4 cell count, HIV-RNA level, and AIDS-defining illnesses (Table 2 and Figure 3).

Table 2: HIV-related baseline characteristics

	Total	INI	NNRTI	PI
<b>CDC stage C (AIDS)*, N (%)</b>	42 (10.3)	17 (10.0)	2 (1.8)	23 (18.4)
<b>CD4 cell count [cells/μL]*,</b> median [IQR] (range)	360 [201-503] (0-1082)	383 [210-504] (0-904)	408 [288-583] (10-1009)	261 [106-389] (0-1082)
<b>CD4 categories; N (%)</b>				
<200/μL *	96 (23.9)	38 (22.4)	11 (9.9)	47 (39.2)
200-349/μL	95 (23.7)	31 (18.2)	31 (27.9)	33 (27.5)
350-500/μL *	108 (26.9)	56 (32.9)	32 (28.8)	20 (16.7)
>500/μL *	102 (25.4)	45 (26.5)	37 (33.3)	20 (16.7)
<b>HIV-1 RNA [log copies/mL]*,</b> median [IQR] (range)	4.7 [4.2-5.2] (2.1-7.0)	4.7 [4.3-5.2] (2.2-6.2)	4.4 [4.0-4.7] (2.1-5.8)	5.1 [4.5-5.4] (2.9-7.0)
<b>HIV-1 RNA &gt;100.000 copies/mL*;</b> N (%)	126 (31.7)	55 (32.4)	7 (6.5)	64 (53.3)
<b>Late presenters*, N (%)</b> def. as CD4<350/μL and/or AIDS	197 (48.4)	71 (41.8)	42 (37.8)	84 (66.7)

\*P&lt;0.05 (comparison across groups); preliminary results (data cut off 04.09.2015)

## Conclusion

- The proportion of patients commencing ART at advanced stages of HIV infection remains high in Germany.
- Treatment choices were based on HIV-related patient characteristics as well as on simplicity, tolerability, pill count and resistance barrier of the regimen.

## Participating centers and organizations

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