

Diagnostic Accuracy of a Screening Instrument predicting future RTW chance of Patients with chronic diseases

Overview of the existing Evidence

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Background

- ➔ Efficacy of return-to-work (RTW) interventions confirmed for several diseases (*Cullen et al 2017*)
 - Musculoskeletal diseases: *Cullen et al 2017, Kamper et al 2014, Schaafsma et al 2013*
 - Cancer: *de Boer et al 2015*
 - Mental diseases: *Cullen et al 2017, Nieuwenhuijsen et al 2014*

- ➔ But: not all patients need the same intensity of rehabilitation for RTW!
 - Graded RTW: high risk of nonRTW (*Streibelt et al 2017, Andrén 2014*)
 - Work-directed interventions: early stage of sick leave (*Vargas-Prada et al. 2016, Anema et al. 2007*)
 - Graded Activity: long term sick leave (*Steenstra et al 2009, Lambeek et al 2010*)

Background

→ Germany: Work-related medical rehabilitation (WMR)

- intensified, focused on working conditions of the person
- oriented on the concept of working performance (e.g. Graded Activity, FCE, work hardening, work adaptation)
- studies: benefit of WMR only for patients having a high risk of non RTW
(Bethge 2017, Streibelt and Bethge 2015)

→ Crucial element:

- access to rehab via application of the patient
- early identification of patients with several RTW risk across diseases

→ Question:

- Is it possible to predict the RTW risk using generic indicators?

Methods

Re-analysis of existing SIMBO studies

- Prospective (multicentre) cohort studies
- SIMBO at admission (t1), outcome 3 months (t2) after rehabilitation
- Inclusion criteria: Patients with different diseases, 18 to 65 years

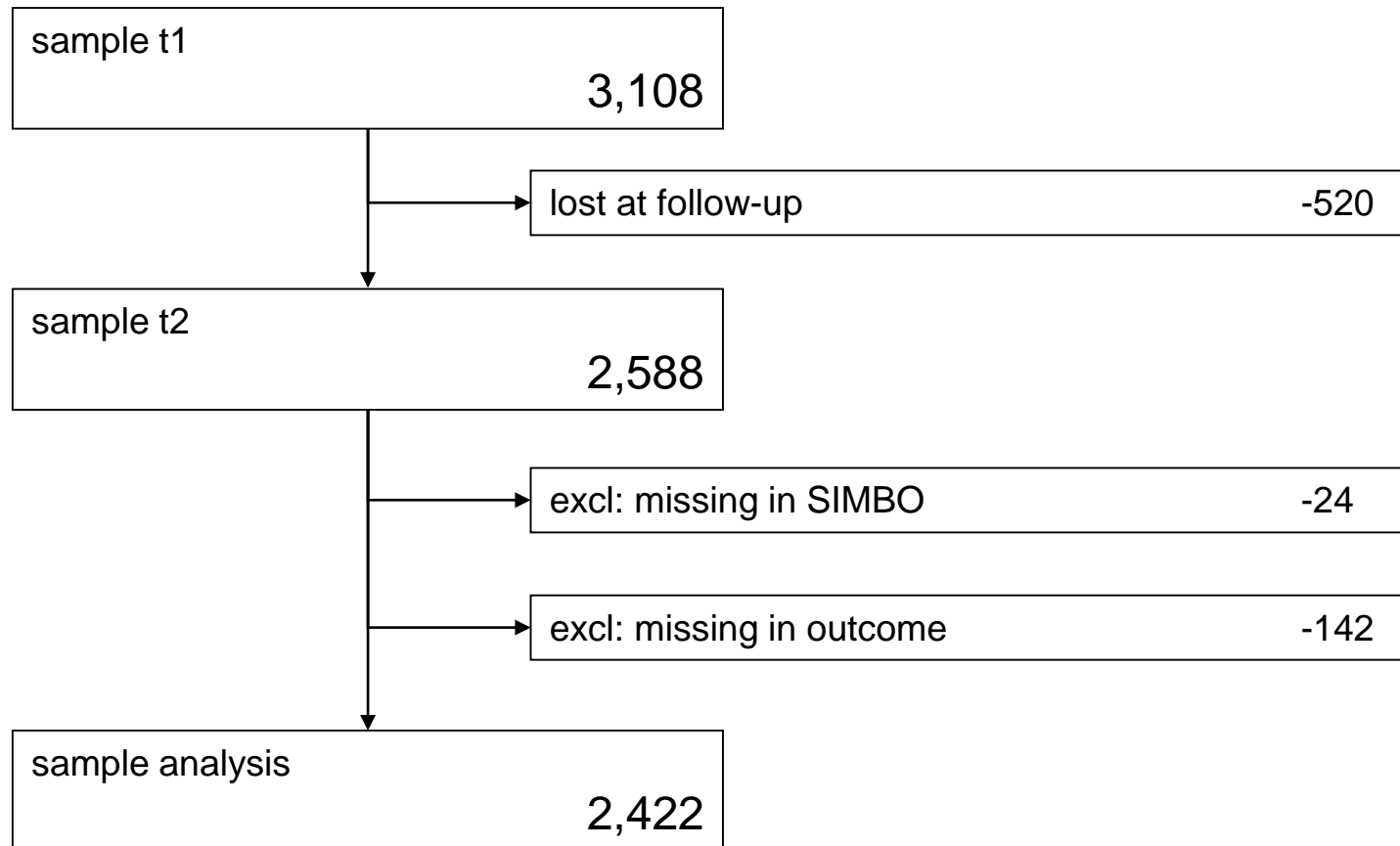
Outcome

- occurrence of a critical RTW event during the follow-up
 - 1) being unemployed at follow-up, 2) time of sick leave >5 weeks, 3) a claim for a disability pension, 4) a claim for further rehabilitation (vocational rehabilitation or graded RTW) during the follow-up period
 - A critical RTW: at least one of the stated events

Analysis

- weighted for age, gender and ICD-10 diagnosis group with regard to the German rehabilitation population in 2015

Sample – flow chart



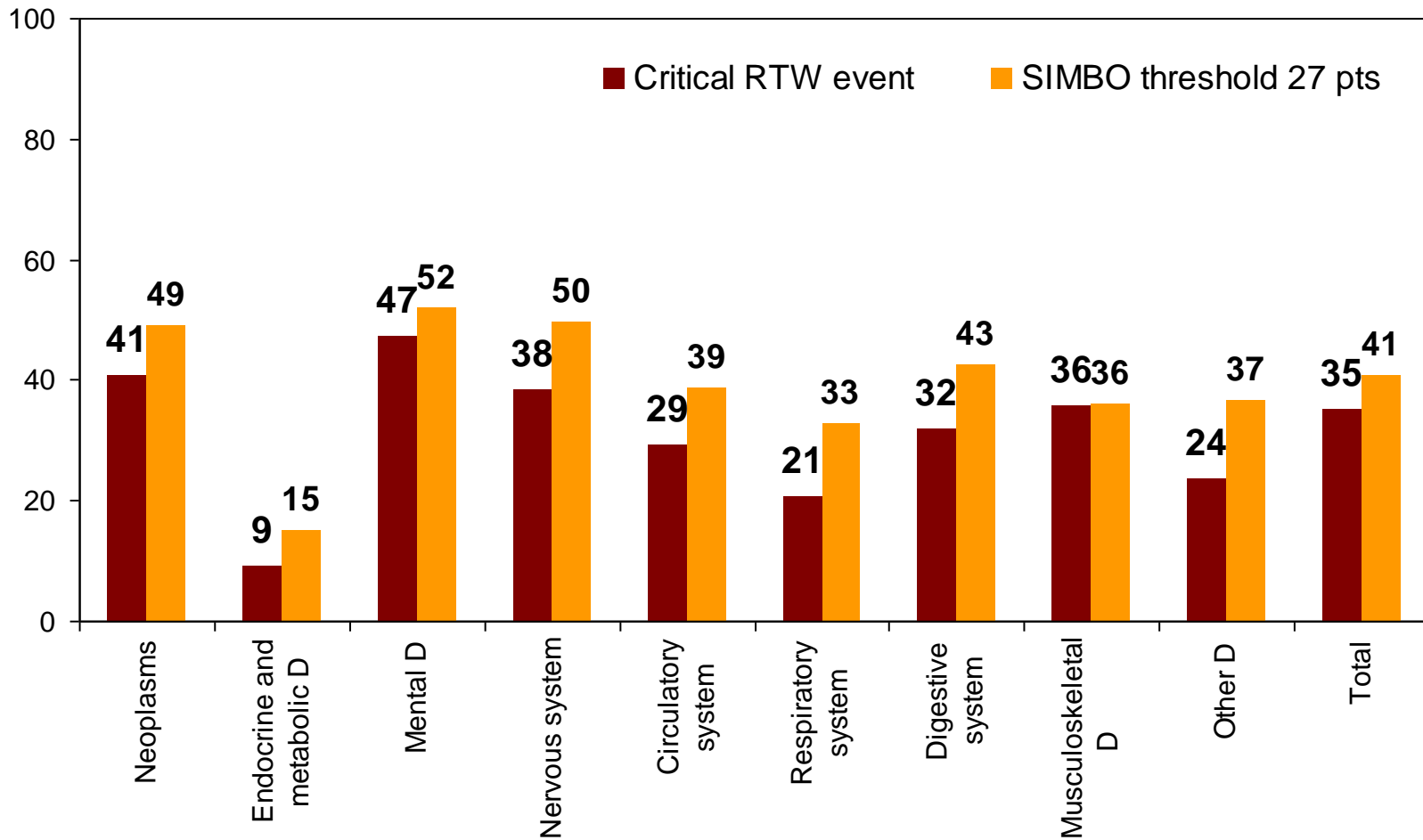
Sample description

	<i>Neo- plasms</i>	<i>Metabolic D</i>	<i>Mental D</i>	<i>Nervous system</i>	<i>Circula- tory system</i>	<i>Respira- tory system</i>	<i>Digestive system</i>	<i>Musculo- skeletal D</i>	<i>Other D</i>
ICD 10 group	C00-D48	E00-E90	F00-F99	G00-G99	I00-I99	J00-J99	K00-K93	M00-M99	**
N	206	343	257	237	538	471	83	157	130
Age (years)*	52,4 ±6,5	51,8 ±8,5	47,6 ±9,6	48,3 ±9,7	54,3 ±6,8	51,9 ±8,6	47,6±10,2	48,8 ±8,2	48,6 ±8,7
Female (%)	68,9	45,2	67,4	57,6	34,0	65,8	63,9	63,7	62,3
SIMBO criteria (%)									
<i>Unemployed</i>	10,7	6,7	20,2	5,5	7,3	10,2	7,3	14,2	9,4
<i>On sick leave</i>	41,0	8,6	42,9	39,1	31,7	28,1	38,3	29,7	28,9
<i>≥6m sick leave</i>	31,0	4,4	23,8	19,1	12,7	8,2	14,8	9,6	13,1
<i>nonRTW</i>	6,8	4,7	14,8	12,7	9,3	7,1	10,8	15,9	7,7

Notes: * Mean ± s; ** A00-B99 (n=8), D50-D90 (n=17), K00-K93 (n=48), N00-N99 (n=3), Q00-Q99 (n=10), R00-R99 (n=8), S00-T98 (n=26), Z00-Z99 (n=10)

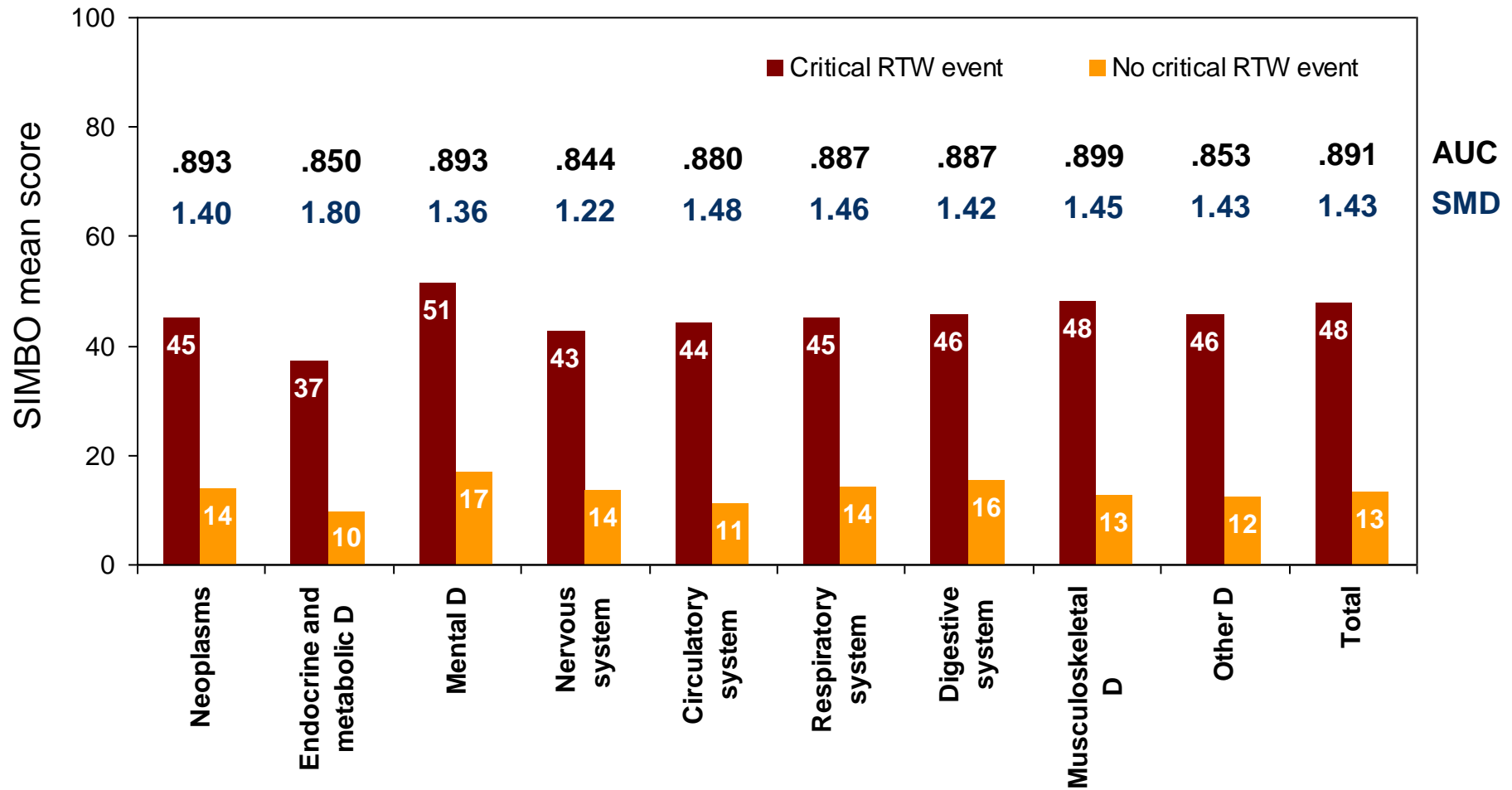
Results

Prevalences of the SIMBO and the outcome



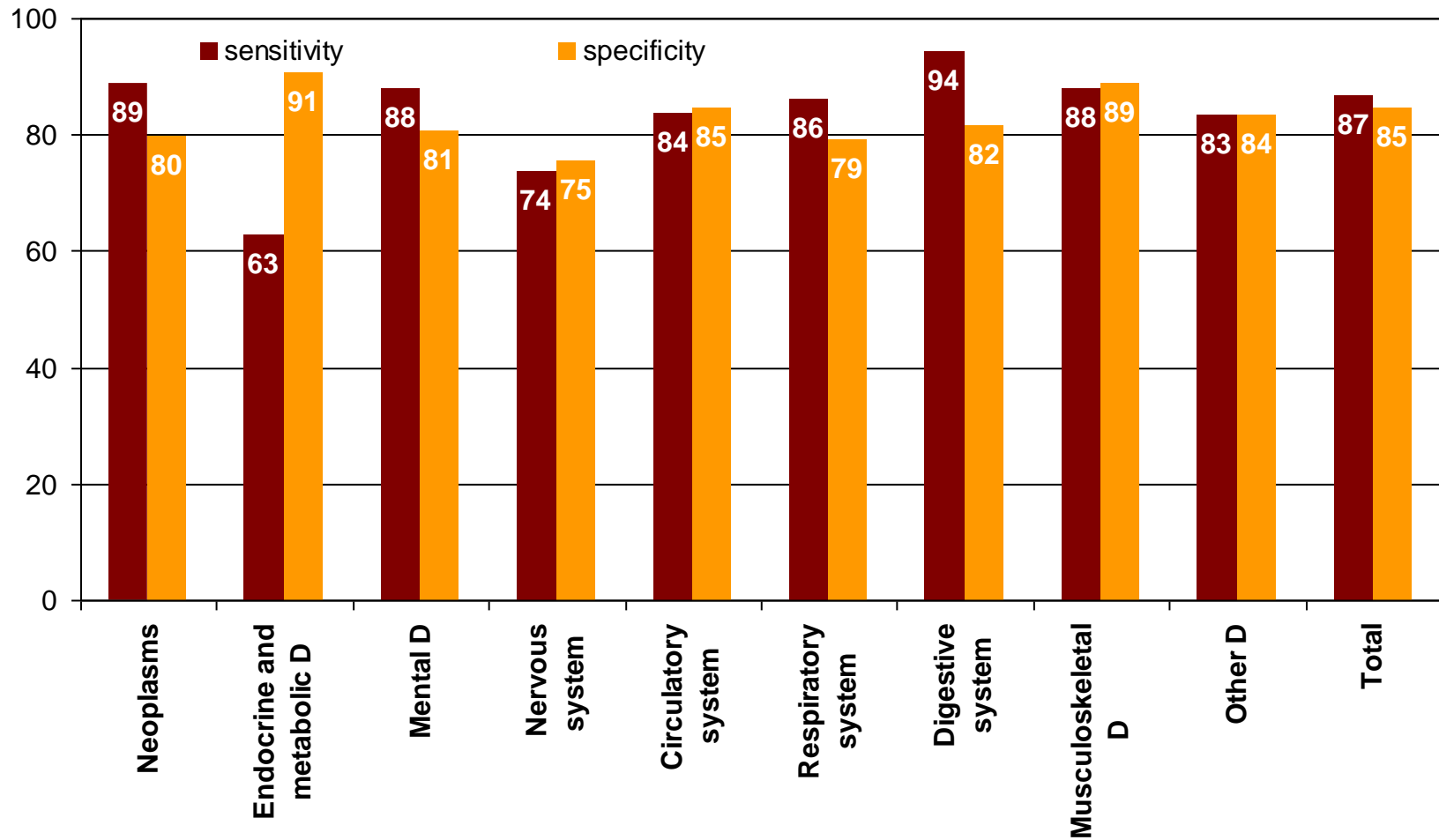
Results

Association to SIMBO Score



Results

Sensitivity and specificity rates (SIMBO threshold 27pts)

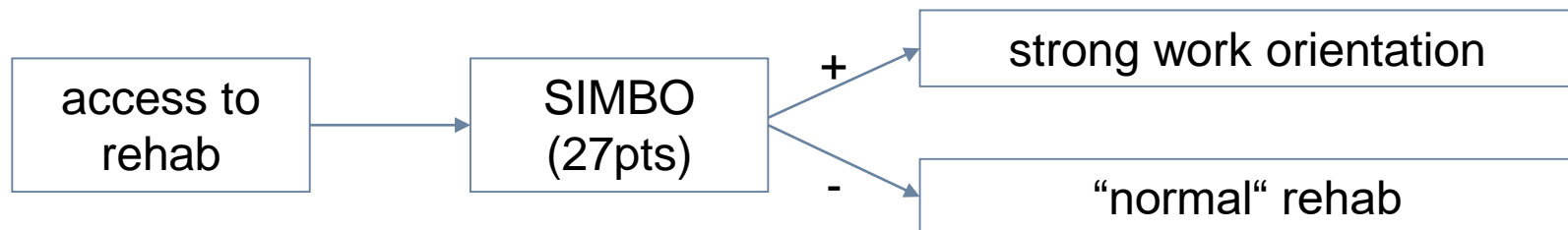


Conclusion

→ Study underlines the diagnostic accuracy of the SIMBO concerning RTW problems after rehabilitation

→ SIMBO

- a very short, self-rated classification and generic tool that is able to differentiate identify the individual risk of further work disability



→ Further research: validity of the SIMBO in other rehab systems?

Thanks!

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