

# Hemorragia SubAracnoidea - PAASH

*Raul RC*

## Prognosis on Admission of Aneurysmal Subarachnoid Hemorrhage (PAASH)

PAASH scale is based on the Glasgow Comma Scale (GCS) assigned at the time of patient admission.

PAASH	GCS
I	15
II	11-14
III	8-10
IV	4-7
V	3

## Clinical table by PAASH

	paash.1	paash.2	paash.3	paash.4	paash.5
Total	69	37	13	7	10
Edad.promedio	51.19	56.92	53.62	48	53.4
Edad.DE	14.53	14.23	8.81	15.52	12.75
Masculino	0.38	0.3	0.15	0.14	0.5
Femenino	0.62	0.7	0.85	0.86	0.5
Antecedente.HAS	0.06	0.08	0.08	0.14	0.1
HAS	0.39	0.51	0.69	0.71	0.5
Comorbilidades	0.41	0.54	0.62	0.71	0.6
Embarazo	0.03	0.03	0	0	0
Hx.Familiar	0.06	0.03	0	0	0.1
Multiples.aneurismas	0.14	0.16	0.08	0.29	0.1

## Aneurysm location: age and gender difference in aneurysm distribution

X	ACA	ACM	ACP	basilar	carotida	otra
1	12	10	4	2	32	1
2	5	16	0	2	9	0
3	4	3	1	0	3	0
4	1	2	0	1	2	0
5	0	1	1	0	5	2

## Percentage of patients with poor outcome

The percentage was calculated based on the PAASH score.

### Glasgow Outcome Scale (GOS)

**GOS 1:** Death

**GOS 2:** Persistent vegetative state

**GOS 3:** Severe disability

**GOS 4:** Moderate disability

**GOS 5:** Good recovery

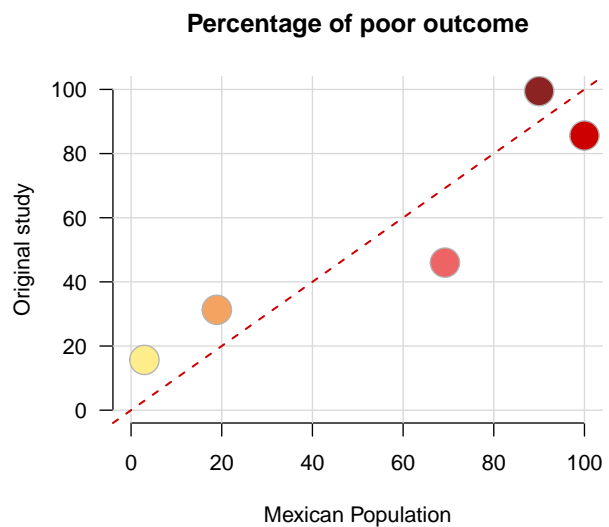
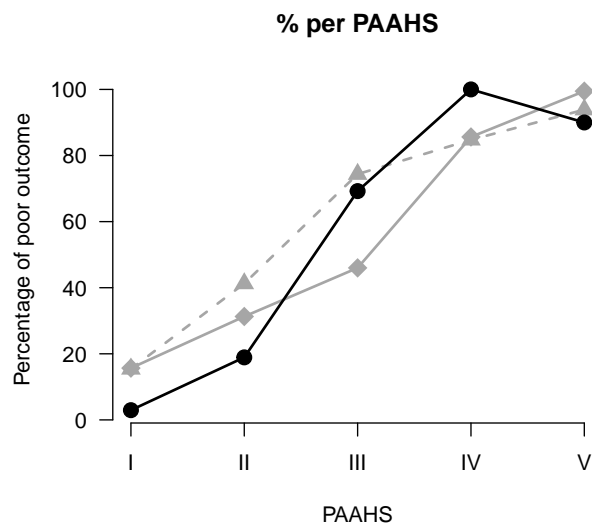
### Outcome based on GOS

**Poor:** GOS 1-3

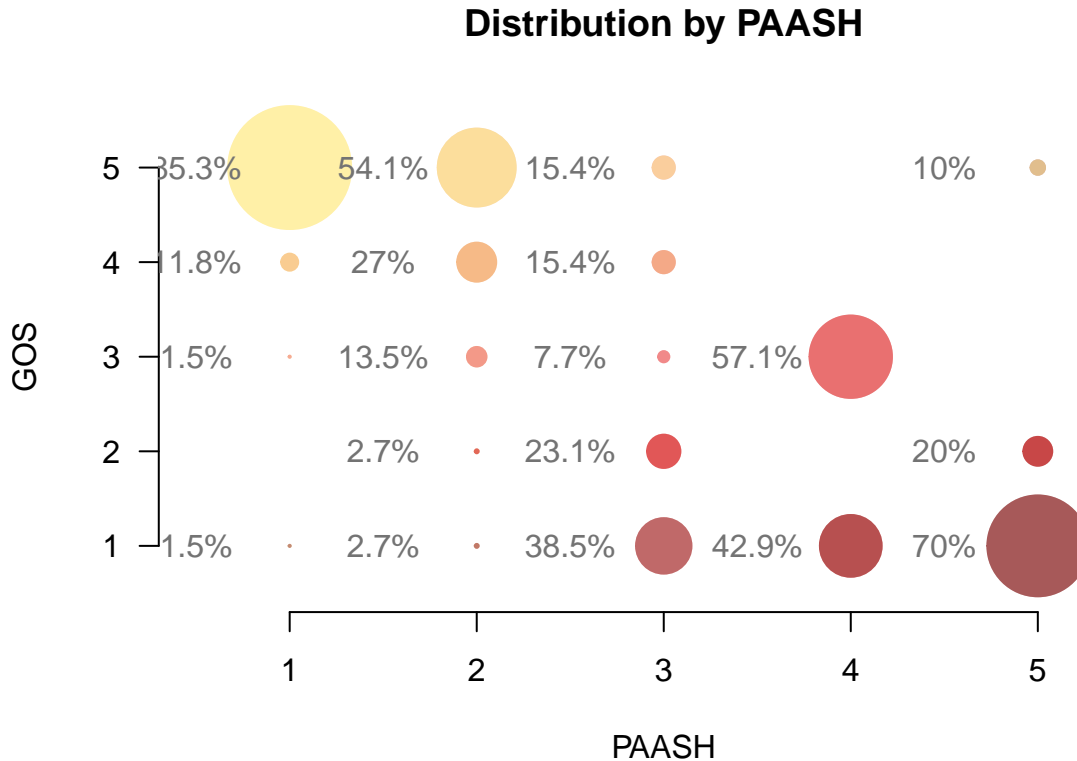
**Fair:** GOS 4-5

There is a significant difference in the percentage of poor outcome between the original study and our cohort for PAASH-I. In our hospital patients with PAASH I have better outcome.

```
## [1] "PAASH-1, X-squared: 6.65, p-val: 0.01"
## [1] "PAASH-2, X-squared: 1.71, p-val: 0.19"
## [1] "PAASH-3, X-squared: 1.4, p-val: 0.24"
## [1] "PAASH-4, X-squared: 0.27, p-val: 0.6"
## [1] "PAASH-5, X-squared: 1.69, p-val: 0.19"
```



## PAASH - GOS relation by cohort



For each PAASH, no significant differences were found for sex or age

```
##
## Kruskal-Wallis rank sum test
##
## data: X by Group
## Kruskal-Wallis chi-squared = 4.8399, df = 4, p-value = 0.3041
##
##
## Pairwise comparisons using Wilcoxon rank sum test
##
## data: X and Group
##
## 1 2 3 4
## 2 1.00 - - -
## 3 1.00 1.00 - -
## 4 1.00 1.00 1.00 -
## 5 1.00 1.00 0.87 1.00
##
## P value adjustment method: bonferroni
## Tukey multiple comparisons of means
## 95% family-wise confidence level
##
## Fit: aov(formula = X ~ Group)
##
## $Group
## diff lwr upr p adj
## 2-1 -0.07034976 -0.3353710 0.1946715 0.9480840
```

```

## 3-1 -0.21380090 -0.6064980 0.1788962 0.5603745
## 4-1 -0.22478992 -0.7397440 0.2901641 0.7469826
## 5-1 0.13235294 -0.3070209 0.5717267 0.9197933
## 3-2 -0.14345114 -0.5617183 0.2748160 0.8771262
## 4-2 -0.15444015 -0.6891495 0.3802692 0.9304598
## 5-2 0.20270270 -0.2596670 0.6650724 0.7439722
## 4-3 -0.01098901 -0.6191739 0.5971959 0.9999986
## 5-3 0.34615385 -0.1995205 0.8918282 0.4044233
## 5-4 0.35714286 -0.2821749 0.9964606 0.5350589

##
## Kruskal-Wallis rank sum test
##
## data: X by Group
## Kruskal-Wallis chi-squared = 3.609, df = 4, p-value = 0.4615
##
##
## Pairwise comparisons using Wilcoxon rank sum test
##
## data: X and Group
##
## 1 2 3 4
## 2 0.94 - - -
## 3 1.00 1.00 - -
## 4 1.00 1.00 1.00 -
## 5 1.00 1.00 1.00 1.00
##
## P value adjustment method: bonferroni
## Tukey multiple comparisons of means
## 95% family-wise confidence level
##
## Fit: aov(formula = X ~ Group)
##
## $Group
## diff lwr upr p adj
## 2-1 5.8306836 -2.076961 13.738329 0.2530821
## 3-1 2.5271493 -9.190060 14.244359 0.9753702
## 4-1 -3.0882353 -18.453321 12.276850 0.9810133
## 5-1 2.3117647 -10.798174 15.421704 0.9883681
## 3-2 -3.3035343 -15.783698 9.176630 0.9485942
## 4-2 -8.9189189 -24.873459 7.035621 0.5343655
## 5-2 -3.5189189 -17.315005 10.277167 0.9548918
## 4-3 -5.6153846 -23.762271 12.531502 0.9122232
## 5-3 -0.2153846 -16.497097 16.066327 0.9999996
## 5-4 5.4000000 -13.675822 24.475822 0.9350929

```