

# Antiphospholipid antibodies and arteriovenous fistula maturation in hemodialysis patients - is there a link?

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## Objective

According to the revised Sapporo criteria, biological criteria for antiphospholipid syndrome (APS) are met when at least one antiphospholipid antibody (aPL Ab) is persistently positive at 12 weeks apart. Currently, only three antibodies are used for APS diagnosis, ie anti beta2 glycoprotein I, anticardiolipin and lupus anticoagulant. The prevalence of aPL Ab (aPL biology) in hemodialysis patients is elevated and is associated with a higher risk of arteriovenous fistula (AVF) thrombosis. However, no data are available regarding aPL Ab implication on AVF maturation. The aim of this work is to evaluate the association between aPL Ab and AVF maturation

## Methods

We retrospectively identified in our center, 103 patients on chronic hemodialysis who were tested at least once for aPL Ab. Only patients with AVF (whether used or not) were enrolled. We collected clinical data and biological factors potentially involved in the maturation of FAV and studied the association between aPL Ab positivity and AVF maturation. AVF outcomes were not considered as a clinical criteria for APS. We have also studied the consequences in terms of HD quality

## Results

Figure 1. Patient flow chart

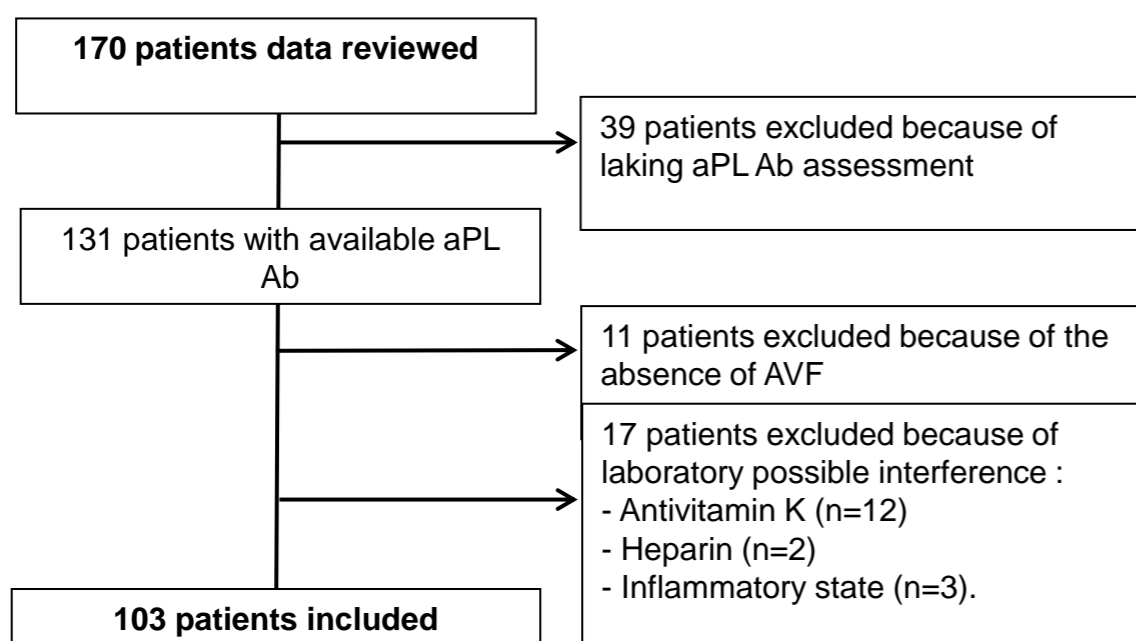


Figure 2. Patient group distribution

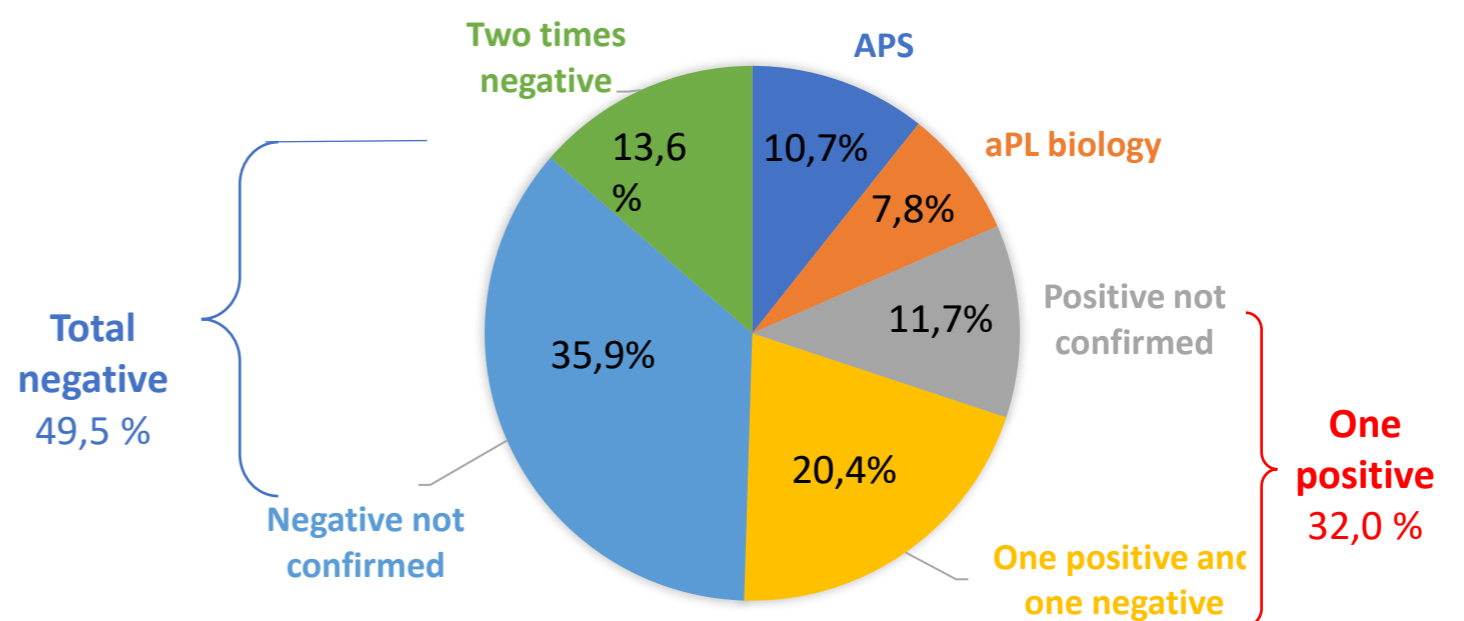
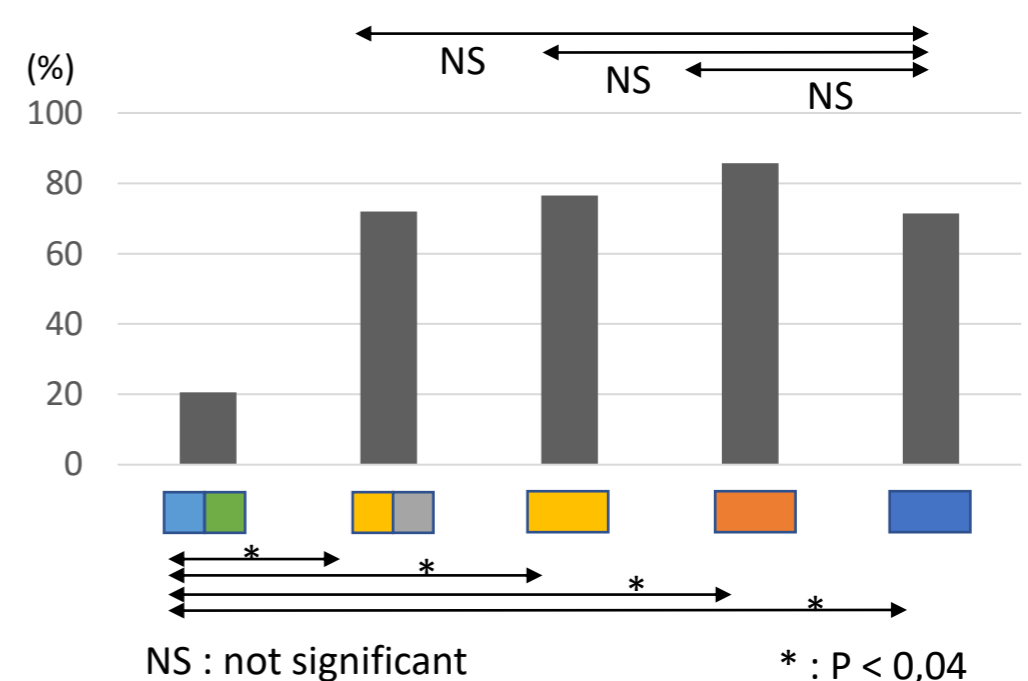


Table 1. Multivariate analysis model

Variables	Model 1		Model 2	
	OR <sub>adjusted</sub> (IC 95%)	p-value	OR <sub>adjusted</sub> (IC 95%)	p-value
Age	0,96 (0,93 – 1,00)	<b>0,04</b>	0,98 (0,95 – 1,02)	<b>0,36</b>
Smoking	0,26 (0,08 – 0,84)	<b>0,02</b>	0,33 (0,11 – 1,00)	<b>0,049</b>
AVF Stenosis	3,36 (1,18 – 9,58)	<b>0,02</b>	4,78 (1,71 – 13,33)	<b>0,003</b>
aPL Biology			8,04 (0,70 – 91,70)	<b>0,09</b>
One Positive	6,08 (1,80 – 20,51)	<b>0,004</b>		

Figure 3. aPL Ab significance  
Prevalence of delayed AVF maturation (%)



## Conclusion

- We report for the first time A SIGNIFICANT ASSOCIATION BETWEEN THE APL AB POSITIVITY AND DELAYED AVF MATURATION.**
- This association was independent of AVF stenosis in multivariate analysis.**
- One well known factor for delayed AVF maturation is intimal hyperplasia. The later (which is associated with aPL Ab in literature) was not evaluated in our study and will need further evaluation.**