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Proposal to Darunavir (DRV) the least trough plasma level (TPL) cut off to estimate plasma HIV viral load (HVL) equal or less than 20 copies/ml.

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❑ Objectives

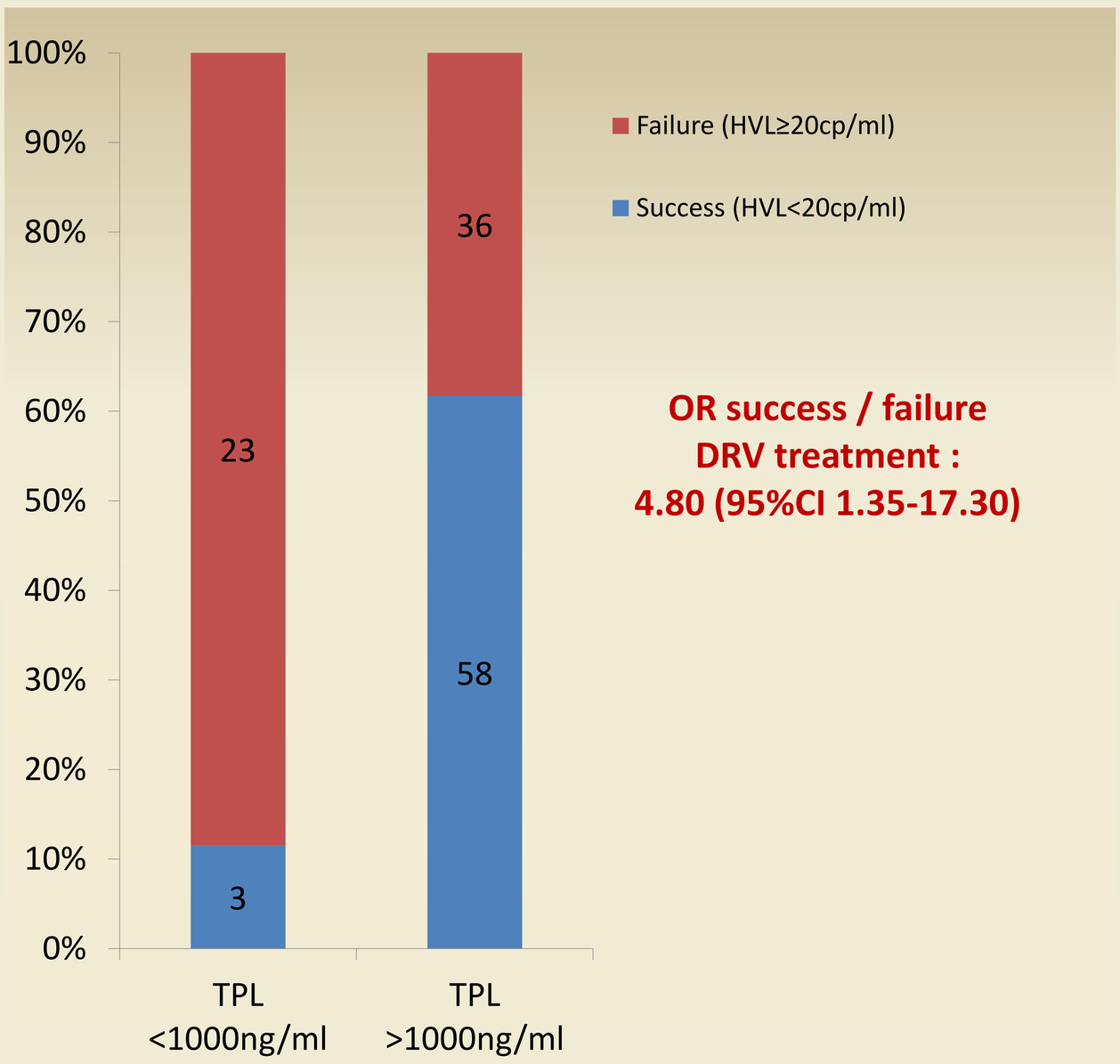
- To find our TPL of DRV from which below this cut-off we can estimate HVL>20 copies/ml
- To check if it is statistically significance this cut-off

❑ Methods

- Cross-sectional observational study that included 51 HIV patients with some drug related problem (DRP), that were receiving TRUVADA® + DRV 800mg once a day for at least 4 months
- 120 blood samples from these patients were collected and assayed by HPLC and rtPCR to quantify TPL and HVL, respectively
- Minimum period between samples for the same patient: 1 month
- Two groups according to TPL of 1000 mcg/l as a random cut-off. In each group, we established the proportion of patients with HVL>20copies/ml

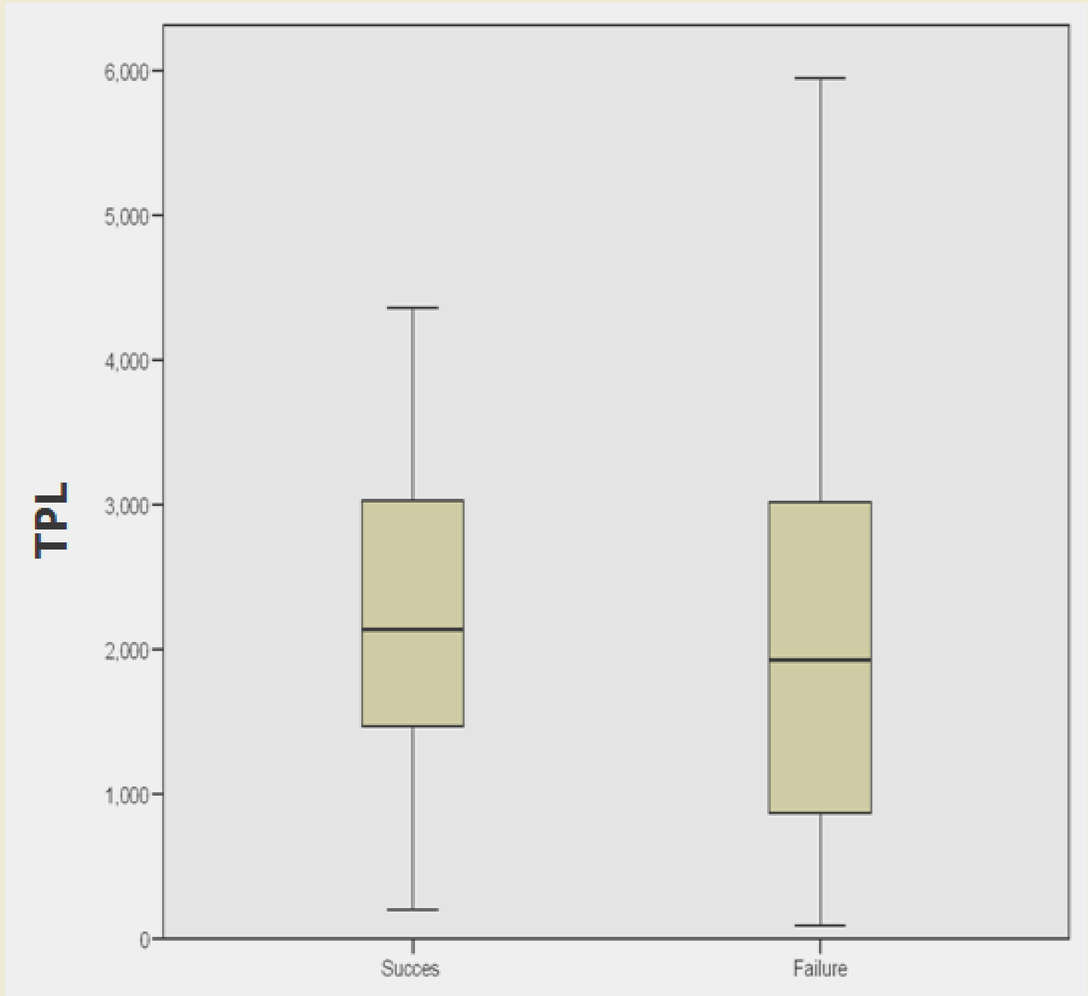
❑ Results

Proportion of patients with DRV treatment



OR success / failure DRV treatment : 4.80 (95%CI 1.35-17.30)

TPL distribution in both groups



Success TPL	75 percentile value	Median value	25 percentile value
	3034,00	2138,50	1438,00
Failure TPL	**75 percentile value**	**Median value**	**25 percentile value**
	3029,50	1930,00	860,75

❑ Discussion

- DRV is a high genetic barrier protease inhibitor, which its combination with a booster drug as ritonavir or cobicistat, has shown high effectiveness to wild type such as resistants strains of HIV
- Lack of conclusive population studies have determined a consensual cut-off level using the IC50 which in wild type is 55 micrograms/litre (mcg/l) and in resistants strains is 550 mcg/l
- It is the first study to point at a TPL cut-off for DRV treatment

❑ Conclusion

- Patients with TPL<1000mcg/l have major risk of therapeutic failure measured by HVL>20 copies/ml
- The 1000mcg/l TPL cut-off is consistent with the 25 percentile value found in the failure group
- We need to increase the size of population in this study to confirm this cut-off

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