

# EVALUATION OF A SYSTEM FOR CYTOKINES ADSORPTION IN A POPULATION OF CRITICALLY ILL PATIENTS: A SINGLE CENTER EXPERIENCE



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## OBJECTIVE

To analyze the clinical and laboratoristic trend of a mixed population of critically ill patients treated with a system for cytokines adsorption (Cytosorb)

- **Primary Endpoint** : to evaluate the efficacy in terms of outcome's improvement (laboratory parameters dosage, catecholamines dosage, SOFA score)
- **Secondary Endpoint** : to evaluate the impact on general variables of outcome (LOS, mortality, days on mechanical ventilation)

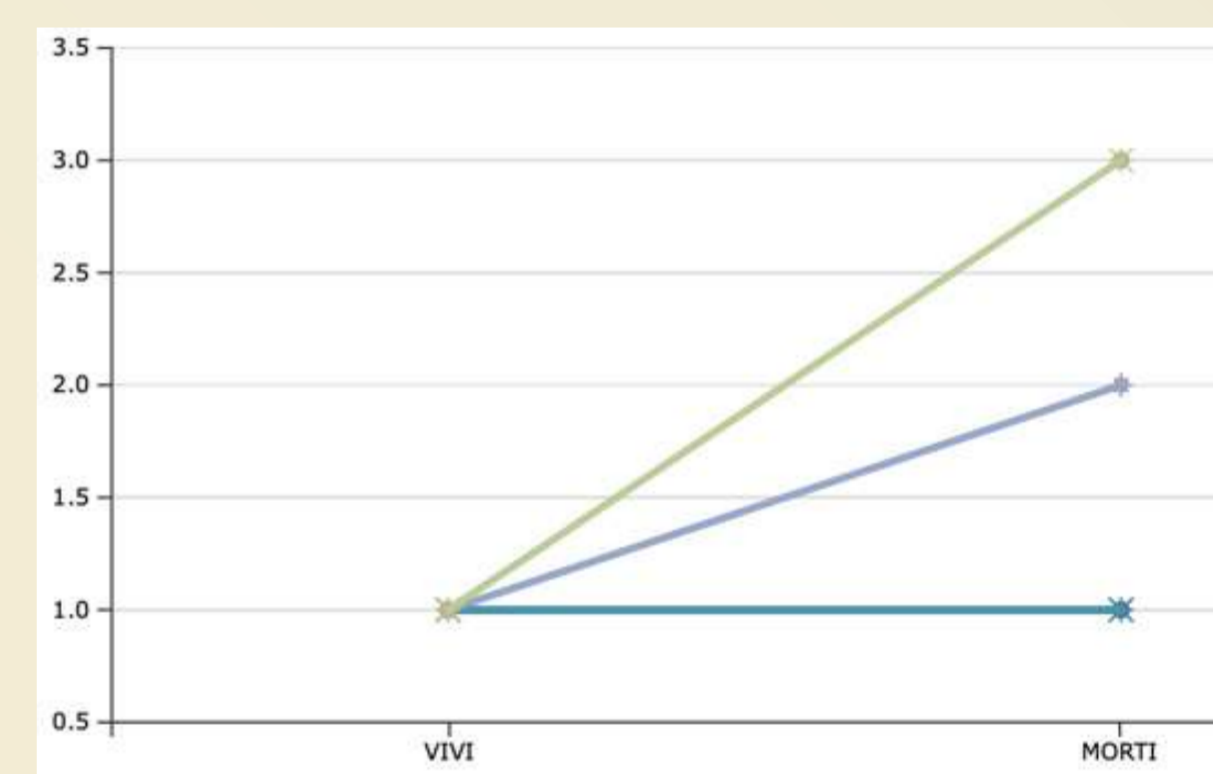
## MATERIALS AND METHODS

- Measurement before the treatment, at days 1, 2, 3, 4;
- Mean, median and standard deviation
- Test for the correlation between variables

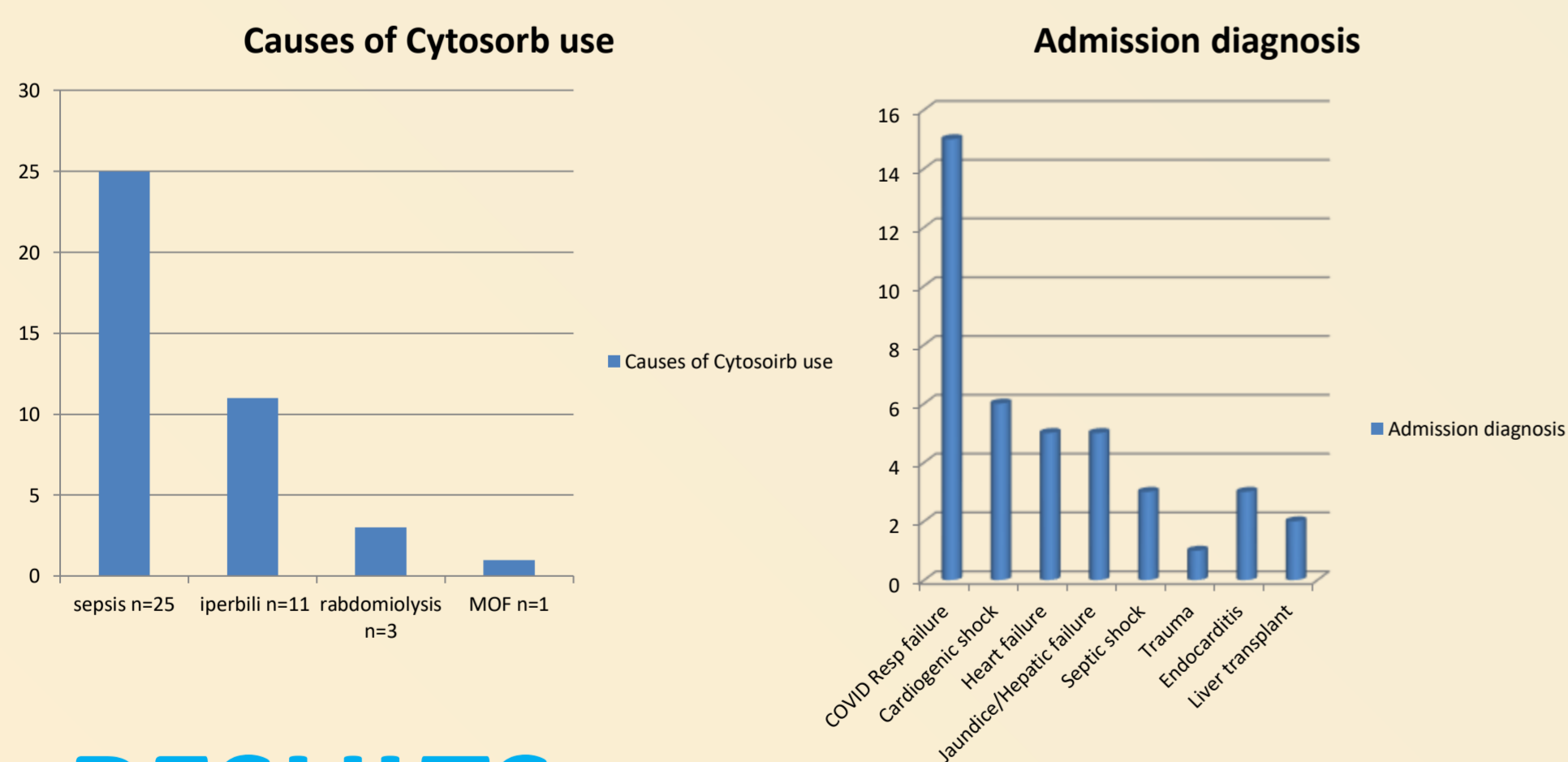
Gender	Male (n=34) Female (n=6)
Age	Mean 60,45 ±10,78
LOS (days)	Mean 52,42±39,51
Length of treatment (days)	Mean 3,725±2,76
Comorbidities	Hypertension (n=19) Dyslipidemia(n=8) Renal failure(n=8) Ischemic cardiopathy(n=8) Tumor(n=8) Obesity(n=7) Diabetes(n=13) Hearth failure(n=7) Organ transplant(n=3)
Number of cycles	1(n=35) 2(n=3) 3(n=1) 5(n=1)
Number of cartridges	Mean 2,825±1,72
LOS ICU (days)	Mean 31,9±23,85
ECMO (YES/NO)	n=11/n=29
Outcome	Survivors (n=21) Deaths(n=19)
Length of MV(days)	Mean 23,625±16,88



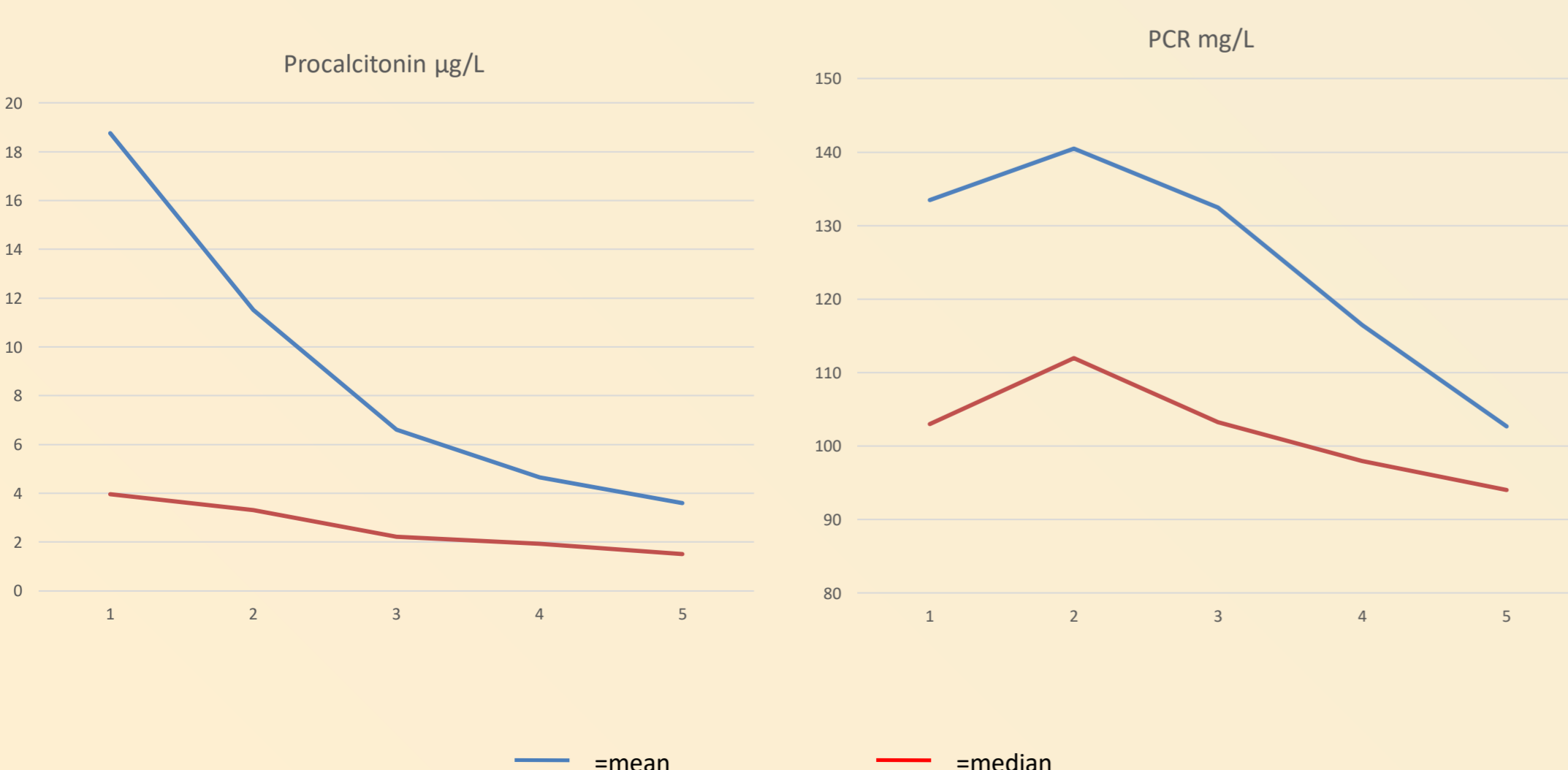
VARIATION (DELTA)	p-VALUE
Procalcitonin	0.627
PCR	0.565
Leucocytes	0.745
Platelets	0.76
Bilirubin	0.937
CPK	0.535
Creatinine	0.183
Noradrenaline	0.413
SOFA	0.71
Cycles	0.0156
Length of treatment	0.053
Cartridges' number	0.548



Correlation between number of cycles and mortality



## RESULTS



## CONCLUSIONS

- Evident trend of reduction of analyzed parameters
  - No correlation between length of the treatment and analyzed parameters
  - Trend of reduction of platelets count (Probably retention of the cartridge)
  - Better management of antimicrobial therapy
  - Cytokines adsorption results as a method with a good efficacy in improving many laboratory parameters and hemodynamic stability in a selected category of patients
- Indications for a wide clinical use must be further confirmed by studies on population with an adequate sample dimension.