Introduction: A high percentage of polytrauma patients require surgery within the first 24 hours to stabilize primary traumatic injuries. One of the main intraoperative complications in this type of patients is due to hemodynamic instability [1]. Thus, it is necessary to implement multimodal monitoring involving both hemodynamic monitoring and monitoring of general anesthesia. The objectives of this study were to identify the possible implications of Entropy monitoring on hemodynamic stability in critically ill polytrauma patients.

Methods: Prospective Observational Study, Deployed in the Clinic of Anesthesia and Intensive Care, Emergency County Hospital "Pius Brinzeu" Timisoara, Romania. ClinicalTrials.Gov Identifier. There were two groups, Group A (N = 37), in which the depth of hypnosis was monitored through Entropy (GE Healthcare, Helsinki, Finland) and Group B (N = 35).

Results: The incidence of hypotension and tachycardia episodes was statistically significantly lower in Group A, unlike the control group (p <0.05). Moreover, a statistically significant (p <0.05) consumption of inhaled anesthetic agent was recorded in Group A compared with Group B. Consumption of vasopressor was also lower in Group A (p <0.0001 , difference between means 0.960 ± 0.063, 95% confidence interval 0.8334 - 1.0866)

Conclusion: Deploying monitoring for the depth of hypnosis in general anesthesia using Entropy can significantly increase the hemodynamic stability of critically ill polytrauma patients.