Introduction:
Aim of this prospective randomized pilot study was to investigate influence of intra operative restrictive volume approach and post operative lung ultrasound (LUS) on prevention and early detection of postoperative interstitial syndrome development.

Methods:
42 cardiac patients who underwent non cardiac surgical procedure were randomly assigned for: group A-liberal volume approach or for group B-combination of restrictive intra operative volume approach and small dose of norepinephrine. All patients post operatively received ≤1,5 ml/kg/h fluids, mostly crystalloids. LUS was performed before surgical procedure and 24 hours after their admission in ICU together with arterial blood gases measurements. The ultrasound characteristic of interstitial syndrome was development of B profile.

Results:
Before surgery all patients had A profile. Twenty for hours later in A group significantly higher number of patients 16/22 (72,7%) vs 3/22 (13,6%) in B group, had B profile (p<0,05). At the same time there were no significant difference between the groups in amount of patients with PaO2/FiO2 ratio ≤ 270 (3 patients with positive B lines from A group vs 0 patients from group B) (p>0,05).

Conclusion:
Intra operative fluid restriction is efficient in prevention of post operative cardiogenic pulmonary edema development. LUS is a simple non invasive method for early detection of interstitial syndrome even before development of signs of respiratory deterioration.

References: