Background and aims Long term complications and mortality of Systemic Lupus Erythematosus Systemic (SLE) are mainly caused by vascular disease and atherosclerosis. Atherosclerosis is characterized by the presence of intima-media thickness (IMT) in the walls of arteries, which is measured by B-mode ultrasonography. IMT is an inflammatory process that is associated with the presence of TNFα. The role of TNFα is important in SLE disease, so it is important to determine the correlation between plasma levels of TNFα and carotid artery IMT, which have high and low plasma levels of TNFα.

Methods A cross-sectional study was conducted on 32 subjects, consisting of women aged ≥ 18 years. Statistical test using unpaired t-test and Spearman rank correlation test was performed.

Results From 32 subjects there were 20 subject (62.5%) have high and low plasma levels of TNFα. The comparison of carotid artery IMT (p=0.045, 95% CI 2.34 until 5.64) in SLE patients showed no significant differences in plasma levels of TNFα with carotid artery IMT (p=0.075; r=-0.319) in SLE patients. We compare subject with carotid artery IMT which have high and low plasma levels of TNFα is same (31.25% vs 31.25%).

Conclusions There were no significant differences and no significant correlation between plasma levels of TNFα with carotid artery IMT in SLE patient.