INTRODUCTION AND AIMS: Tacrolimus (Tac), mycophenolic acid (MPA) and prednisolone are major immunosuppressive drugs after renal transplantation (RTx) and Tac is often considered as the mainstay of the RTx therapy. There are reports in the literature regarding the use of Tac in bronchiolitis obliterans after lung transplantation and interstitial lung diseases related to connective tissue diseases. Also MPA is reported to be effective in scleroderma induced interstitial lung disease even in lower doses. We herein present the preliminary results of follow-up the lung functions of RTx recipients with no underlying lung disease.

METHODS: We collected data of 51 RTx patients, 19 Female and 32 Male, ages varying between 23-67 years (mean age 49.76 years) between January 2015 and January 2018 receiving standard immunosuppressive therapy. Those data included spirometry, CO diffusion tests, Tac dosing regimen and serum Tac levels. Spirometry were performed in 3 periods: before RTx (baseline), 3 to 9 months after RTx and first year post-RTx.

RESULTS: The mean percentage predicted baseline forced vital capacity (FVC) was 80.2% ± 15 standard deviation (SD). The mean percentage predicted 1 year post-RTx was 92.3% ± 19 SD. The difference between the results were statistically significant (p = 0.001). The mean percentage predicted baseline forced expiratory volume in 1 second (FEV1) was 78.2% ± 0.7 SD. The mean percentage predicted FEV1 one year post-RTx was 86.3% ± 17 SD. The difference between those FEV1 levels were also statistically significant (p = 0.031). The mean percentage predicted 3 to 9 months after RTx FEV1 was 93.8% ± 19.3 SD. The mean percentage predicted 1 year post-RTx FEV1 was 86.3% ± 16.5 SD. When those results were compared, the difference was statistically significant (p = 0.018). There were no statistically significant difference between CO diffusion test results obtained at the same time periods as spirometry.

CONCLUSIONS: Our findings suggest that, with appropriate immunosuppressive regimen and proper follow-up, lung functions are preserved and even improved in RTx recipients. As there is an expected decrease in FEV1 levels in elderly patients, it is especially important that we have seen an increase in FEV1 levels in a RTx patient group consisting of relatively old individuals.