

# Conférence laurentienne de rhumatologie

## Laurentian Conference of Rheumatology

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Abstract #: 23

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### Association between Immunosuppression and Risk of New Onset Interstitial Lung Disease in Systemic Sclerosis

**Objective(s):** Interstitial lung disease (ILD) is a leading cause of mortality in systemic sclerosis (SSc), and immunosuppressive drugs are used for the treatment of established disease. The aim of this study was to determine if, in SSc patients without ILD, immunosuppressive drugs were associated with a lower risk of new onset SSc-ILD.

**Method(s):** A retrospective cohort of 919 SSc patients without ILD at baseline was studied, using data from the Canadian Scleroderma Research Group registry. The primary exposure was immunosuppression with methotrexate, cyclophosphamide, mycophenolate and/or azathioprine, modeled as a time-dependent variable. Time to new onset ILD was compared between exposed and unexposed subjects, using an unadjusted Kaplan-Meier model and a marginal structural Cox model incorporating inverse probability of treatment weights (IPTW) to account for confounding.

**Result(s):** The study included 213 subjects exposed to immunosuppression at baseline or during follow up and 706 unexposed subjects. In unadjusted Kaplan Meier analysis, the risk of ILD was similar in exposed compared to unexposed subjects (log rank  $p=0.663$ ). The marginal structural Cox analysis incorporating IPTW produced a weighted hazard ratio of 0.84 (95% CI 0.55, 1.27) for new onset ILD in subjects exposed to immunosuppressive drugs compared to unexposed subjects.

**Conclusion(s):** We were unable to determine, in this sample, if immunosuppressive drug exposure was associated with decreased risk of ILD in scleroderma. The preventive role of immunosuppression within subgroups of patients at higher risk for developing ILD could be the topic of future studies.

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