

## Abstract Submission No.: A-0802

### Immunosuppression Response and Relapse among a Diverse Cohort of Adults with Primary Focal Segmental Glomerulosclerosis (FSGS) in the United States

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**Objectives :** FSGS is associated with variation(s) in treatment patterns and outcomes, with remission rates between 40-70%. The heterogeneity of FSGS contributes to these variations due to different etiologies. We summarize treatment and response rates among a diverse real-world population of patients with biopsy-proven primary FSGS.

**Methods :** A retrospective cohort study within Kaiser Permanente Southern California was performed among patients (age $\geq$ 18yrs) with biopsy-proven primary FSGS (2010-2021). Primary FSGS was defined as the principal pathology diagnosis AND electron microscopy demonstrating podocyte foot process effacement  $\geq$ 80%. Treatment index was defined as immunosuppression initiation within 4-weeks prior to and up to 1-year following biopsy. Baseline characteristics were measured during the 1-year prior to index. Treatment response at 8 months was categorized as complete remission (CR; urine protein to creatinine ratio [UPCR] $<$ 0.3g/g) or partial remission (PR; UPCR decline of  $>$ 50% from baseline and between 0.3-3.5g/g). Relapse was defined as any measure outside the CR and PR criteria within 2-years from remission. Multivariate cox regressions were used to estimate hazard ratios (HR) for treatment response.

**Results :** Among 528 patients with primary FSGS, 280 (53%) received immunosuppression. After exclusion criteria (Figure1), 230 patients comprised the study cohort with 209 (91%) receiving corticosteroids. The mean age of the treated cohort was 57.5 years (SD18.3), with 53.9% males, 29.6% Hispanic/Latino, 32.6% White, 20.0% Asian/Pacific Islander, and 17.0% Black patients. Mean eGFR was 46.5 (SD28.6) mL/min/1.73m<sup>2</sup> and median UPCR (IQR) was 5.5 (3.8-8.8) g/g. Overall, 125(54.3%) patients achieved remission (98PR and 27CR). Adjusted HR (95% CI) for remission: hyperlipidemia 0.47(0.31-0.73), black race 0.51(0.28-0.93), older age 1.13(1.00, 1.28) and baseline eGFR $>$ 60ml/min/1.73m<sup>2</sup> 1.96(1.15, 3.34). Within 2-years of PR or CR, 90(72%) patients relapsed.

**Conclusions :** Among adult primary FSGS patients, 53% were treated with immunosuppression, with moderate (54%) response rate, and 72% of responders relapsed within 2-years after achieving remission highlighting an unmet need in primary FSGS.

Figure - Study population flow chart.jpg

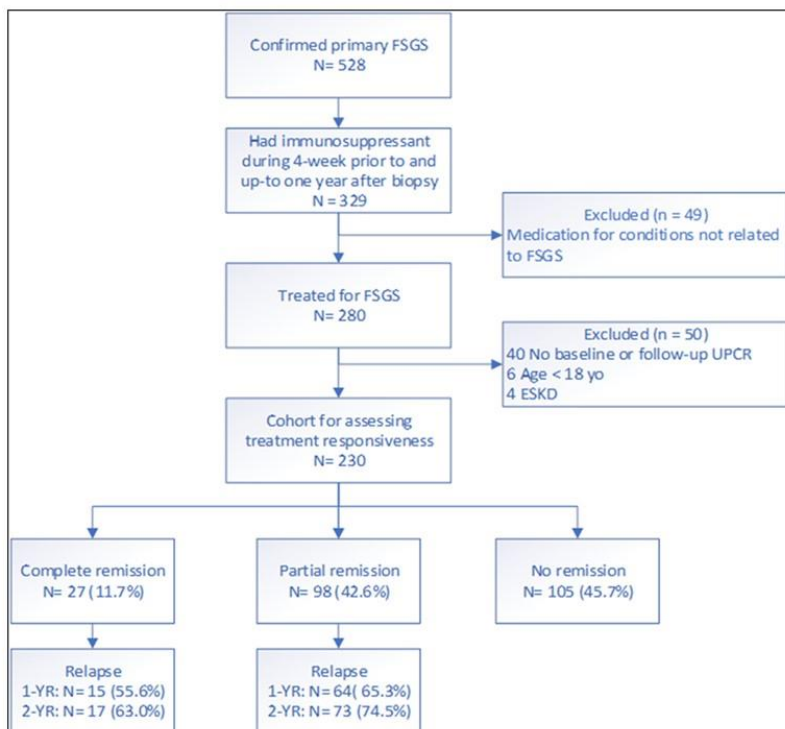


Figure - Study population flow chart.jpg

Multivariable Cox Regressions to estimate Hazard Ratio (HR) for Remission among Treated FSGS Patients

	Adjusted Hazard Ratios <sup>§</sup> (95%CI)
<b>Nephrotic [UPCR&gt;3.5g/g] (yes vs. no)</b>	1.20 (0.73, 1.99)
<b>Albumin &lt;3g/L (yes vs no)</b>	1.14 (0.77, 1.67)
<b>Hyperlipidemia (yes vs. no)</b>	0.47 (0.31, 0.73)
<b>Race/ethnicity (ref=White)</b>	
Asian/Pacific Islander	0.67 (0.41, 1.07)
Black	0.51 (0.28, 0.93)
Hispanic	0.86 (0.54, 1.38)
<b>Initial treatment (steroid vs. other)</b>	2.07 (0.94, 4.57)
<b>Age (10-year increment)</b>	1.13 (1.00, 1.28)
<b>eGFR (ref=30 or below)</b>	
30-59	1.45 (0.9, 2.34)
60+	1.96 (1.15, 3.34)
<b>Male (vs. female)</b>	1.35 (0.93, 1.95)

<sup>§</sup>Mortality as competing risk