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## Benefit of B7-1 staining and abatacept for treatment-resistant post-transplant focal segmental Glomerulosclerosis in a predominantly pediatric cohort: Time for a reappraisal

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**Background:** Primary FSGS manifests with Nephrotic Syndrome and may recur following KT. Failure to respond to conventional therapy after recurrence results in poor outcomes. Evaluation of podocyte B7-1 expression, and treatment with abatacept (a B7-1 antagonist) has shown promise but remains controversial.

**Methods:** From 2012 to 2020, twelve patients developed post-KT FSGS with nephrotic range proteinuria, failed conventional therapy, and were treated with abatacept. Nine/ twelve (< 21 years old) experienced recurrent FSGS; three adults developed de novo FSGS, occurring from immediately, up to eight years after KT. KT biopsies were stained for B7-1.

**Results:** Nine KTRs (75%) responded to abatacept. Seven of nine KTRs were B7-1 positive, and responded with improvement/resolution of proteinuria. Two patients with rFSGS without biopsies resolved proteinuria after abatacept. Pre-treatment UPCr was 27.0 +/- 20.4 (median 13, range 8-56); follow-up UPCr was 0.8 +/- 1.3 (median 0.2, range 0.07-3.9, P< 0.004). Two patients who were B7-1 negative on multiple KT biopsies did not respond to abatacept, and lost graft function. One patient developed proteinuria while receiving belatacept, stained B7-1 positive, but did not respond to abatacept.

**Conclusions:** Podocyte B7-1 staining in biopsies of KTRs with post-transplant FSGS identifies a subset of patients who may benefit from abatacept.

### References

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### Biography

George W Burke is currently working as a Professor in the department of Miller School of Medicine, University in Miami Health system, USA. His research interests include Surgery. He is serving as an editorial member and reviewer of several international reputed journals. He is the member of many international affiliations. He has successfully completed his administrative responsibilities. He has authored of many research articles/books related to Surgery.

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