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## Clinical Nephrology

# Albuminuria Is a Target for Renoprotective Therapy Independent from Blood Pressure in Patients with Type 2 Diabetic Nephropathy: *Post Hoc* Analysis from the Reduction of Endpoints in NIDDM with the Angiotensin II Antagonist Losartan (RENAAL) Trial

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Albuminuria reduction could be renoprotective in hypertensive patients with diabetic nephropathy. However, the current use of renin-angiotensin-system intervention is targeted to BP only. Therefore, this study investigated the adequacy of this approach in 1428 patients with hypertension and diabetic nephropathy from the placebo-controlled Reduction of Endpoints in NIDDM with the Angiotensin II Antagonist Losartan (RENAAL) study. Investigated were the extent of discordance in treatment effects on systolic BP (SBP) and albuminuria and its association with renal outcome in a multivariate Cox model. Among patients with a reduced SBP during treatment, a lack of albuminuria reduction was observed in 37, 26, and 51% (total, losartan, and placebo, respectively) at month 6. SBP or albuminuria reduction was associated with a lower risk for ESRD, whereas combined SBP and albuminuria reduction was associated with the lowest risk for events. Across all categories of SBP change, a progressively lower ESRD hazard ratio was observed with a larger albuminuria reduction. A lower residual level of albuminuria was also associated with lower ESRD risk. In conclusion, changes in albuminuria are not concordant in a substantial proportion of patients when titrated for BP. Meanwhile, the ESRD risk showed a clear dependence on albuminuria reduction. The ESRD risk also showed dependence on the residual level of albuminuria, even in patients who reached the current SBP target. Antihypertensive treatment that is aimed at improving renal outcomes in patients with diabetic nephropathy may therefore require a dual strategy, targeting both SBP and albuminuria reduction.

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