

### 【Outstanding Academic Research Meeting I-3】

#### Rapid Kidney Function Progression in Polycystic Kidney Disease

#### 多囊腎病的腎功能快速惡化

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Autosomal Dominant Polycystic Kidney Disease (ADPKD) stands at the forefront as the predominant hereditary kidney affliction affecting adults, with prevalence estimates ranging from 1 in 400 to 1000 individuals. Despite its prevalence, the noteworthy rapid deterioration of kidney function has historically garnered limited attention within the clinical domain, primarily due to the dearth of effective treatments until recent times.

The emergence of tolvaptan therapy marks a significant stride in addressing this clinical gap, demonstrating efficacy in slowing the decline of kidney function. However, the clinical landscape remains challenging, as a considerable cohort of patients persists in experiencing unabated disease progression despite diverse interventions. Unveiling the intricate genetic tapestry of ADPKD reveals a remarkable heterogeneity, with the genotype emerging as a pivotal determinant in shaping the trajectory of kidney function decline. Notably, individuals harboring PKD1 truncation mutations tend to face a more unfavorable prognosis, highlighting the nuanced interplay of genetics in the course of the disease.

In addition to the genetic intricacies, a multitude of clinical parameters has surfaced as valuable prognostic indicators for ADPKD progression. Recent research endeavors have brought to light additional risk factors within the ADPKD population, encompassing complications such as cyst infections, cyst hemorrhages, and the presence of proteinuria. Recognizing these specific risk factors assumes paramount importance, paving the way for the implementation of personalized medicine strategies that extend beyond conventional treatments. This personalized approach holds immense promise in delivering more holistic healthcare tailored to the unique needs and intricacies of individuals grappling with the challenges posed by ADPKD. As the field advances, the amalgamation of genetic insights and clinical parameters offers a comprehensive roadmap for refining treatment strategies and enhancing the overall well-being of those affected by ADPKD.

