Assessing Baseline Cardiovascular Disease for Kids
Initiating Kidney Replacement Therapy: ABCD4Kids Study

Post-hoc analysis of prospective multicenter cohorts
The 4C & 3H study

Children with CKD stage 4-5
Median age 14 years
eGFR 12.2 ml/min/1.73m²

3-time points, longitudinal evaluation
median 35 days, 1-yr & 2-yr before KRT start

- Structural and functional surrogate CV measures
- Modifiable CV risk factors

Surrogate measures of CV damage
- Carotid intima media thickness
- Pulse wave velocity
- Left ventricular mass index
- Mid-wall fractional shortening

Conclusion: A high burden of cardiovascular damage is progressively accrued in the years preceding KRT onset, largely from modifiable risk factors

>3 CVD risk factors: 79% patients
>2 CVD risk factors: 92% patients

76% patients had ≥1 abnormal CV measure at KRT start

Prevalence of aortic stiffness accelerated 1-yr before KRT start
LVH (concentric) significantly increased over 2-yr before KRT-start

54% of patients with concentric LVH showed systolic dysfunction

Strong linear association of modifiable risk factors including diastolic BP and BMI with CV measures

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