Supplementary Appendix: Methods

This was a prospective (mixed-longitudinal study), and the ages of patients at the time of enrolment and the observation periods differed substantially. Thus, synchronization of anthropometric data was not feasible. Instead, all measurements were grouped according to age at time of examination, and 1-year intervals covering the age ranges from 2 to 18 years were defined; e.g. patients aged between 2.0 and 2.99 were grouped to age cohort 2 years, and patients aged between 3.0 and 3.99 years were grouped to age cohort 3 years. The distribution of male and female patients did not differ between the age cohorts ($p>0.05$). A total of 1639 annual measurements were available and age cohorts comprised from 25 up to 166 measurements (mean 96) and 1 up to 13 measurements per child. Paired parameters of the four linear body segments, in each age cohort, were compared with paired sample t test in case of normal distributed data, otherwise Wilcoxon Signed Rank Test was used. In order to account for repeated comparisons (17 age cohorts) the Familywise error (FW(α)) was used for analysis: $FW(\alpha) \leq 1 - (1- \alpha')^c$. In case of multiple testing the p values had to be ≤ 0.003 in the present study In order to keep the Familywise alpha values at 0.05.

The linear mixed effects models were used (MIXED procedure in SPSS) for evaluation of age-related changes in linear body dimensions of post transplant growth in 389 patients including the following outcome measures: height, sitting height, arm and leg length, and sitting height index (SDS values). Catch-up growth was defined as a statistically significant increase of mean z-scores following a period of diminished growth. Predictors of post transplant growth were defined as factors and covariates. The following factors were evaluated: preemptive KTx versus prior dialysis treatment, living related versus cadaveric donor graft, primary renal disease (congenital CKD versus others), and sex. The following covariates having the same value throughout the follow-up study were addressed: age and time at KTx, age at end-stage CKD, parental height, history of intrauterine growth restriction (SGA), gestational age, and umbilical cord artery pH at birth. In addition, covariates

assessed at yearly intervals (mean annual values in each individual patient), i.e. steroid dosage (mg/kg), eGFR, hemoglobin, bicarbonate levels, bone age delay (difference between chronological age and bone age), and age cohort were used. The random intercept model was used with first order autoregressive covariance type (AR1) of residuals. Model statistics are given by estimates of fixed effects of each variable accompanied by t-test for significance. Estimates of covariance parameters for residual variance was tested using Wald Z test.