

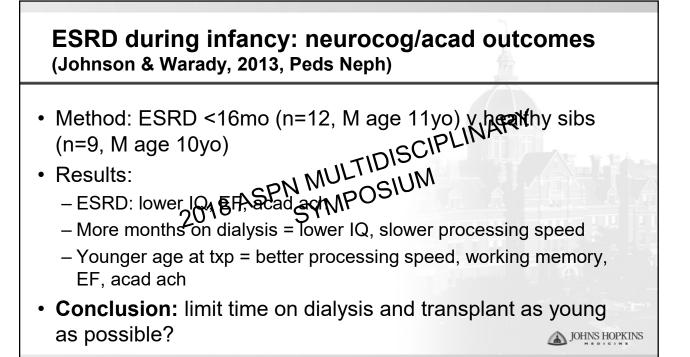
### CKiD: mild-mod CKD & neurocog functioning (Hooper et al., 2011)

- Sample: n=386 (26% FSGS, 74% structural urologic disease; 59% male, 69% White, 18% LBW) vs asthma (n=61) and seizures ref=43)
- Method: disease severity (iGFR, elev protestulia), IQ (WASI), attention (CPT-II), EF (parent BRNEP), and active ach (WIAT)
- Results: 2018 ASP'SYMPC
   high iGFR → better EF, acad skills
  - elev prot  $\rightarrow$  lower IQ, verbal IQ, attn probs
- Conclusion: most mild-mod CKD have normal cog fxn, but 20-40% showed dysfunction <u>></u>1 SD

## Systematic review: neurocog outcomes of ESRD, ESLD, CF, & hemophilia A (Moser et al., 2013, peds anesth)

- Groups chosen to represent low cog risk (CF), moderate risk (ESRD, Ns=14-62), high risk (hem ApEND)
- ESRD & ESLD: mild cog deficits (Moore than CF, hem A), with improvements associated with Eransplant
- ESRD: renal the improves cog function:
  - post-dialysis (Mendley & Zelko, 1999; Rasbury et al., 1983)
  - at/before age 30mo pre/post txp (Davis et al., 1990)

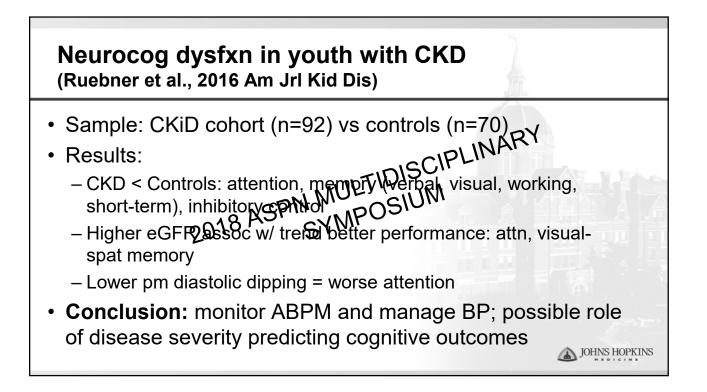
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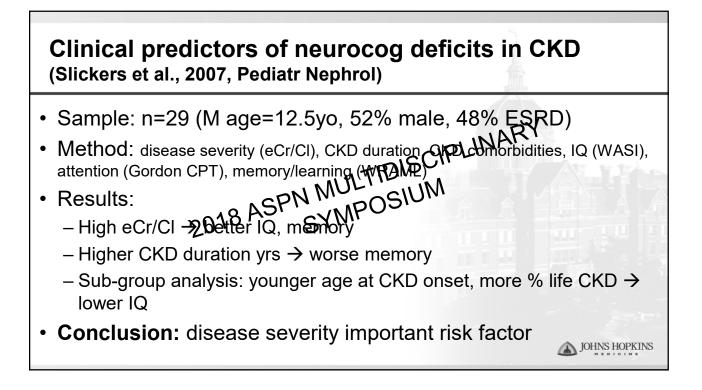


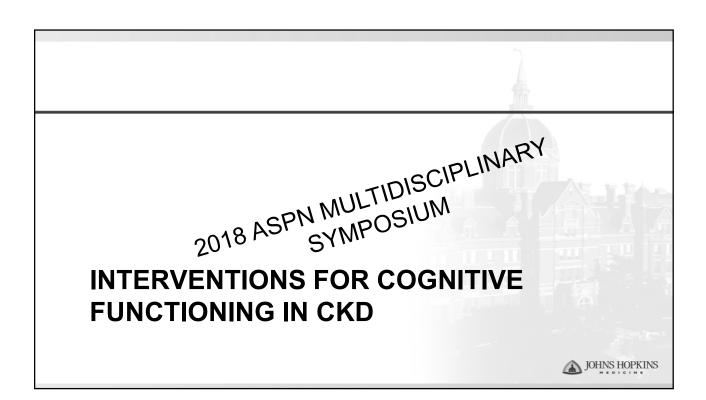
#### CKiD: CKD duration and EF (Mendley et al., 2014)

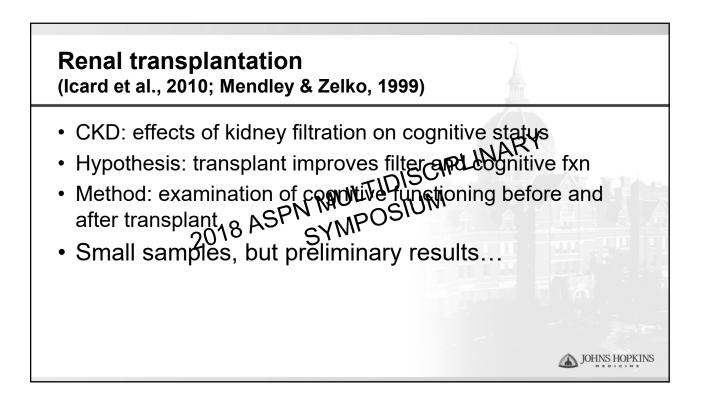
- Sample: n=340 (61% male, 83% White), ages 21yo
- Method: eGFR, CKD duration, attaistic (DKEFS)
  Results:
- Results: 22% had IQ**265**,85% EF**9%№**(≥1 SD below mean)
  - Longer CKD duration  $\rightarrow$  worse inhibitory control, vigilance (attn)
  - All other areas were not related to CKD duration, and no findings related to eGFR
- **Conclusion:** disease duration important for EF

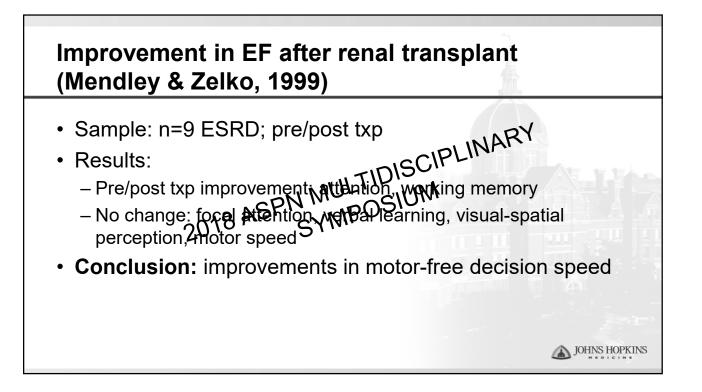
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# Cognitive improvement in CKD after transplant (lcard et al., 2010, pediatr transpl)

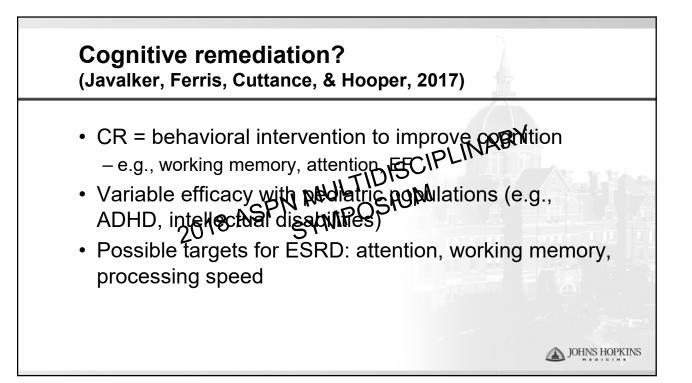
- Sample: n=6 txp, n=20 CKD no txp, n=23 controls
- Results:
  - Txp=IQ boost<sub>2018</sub>

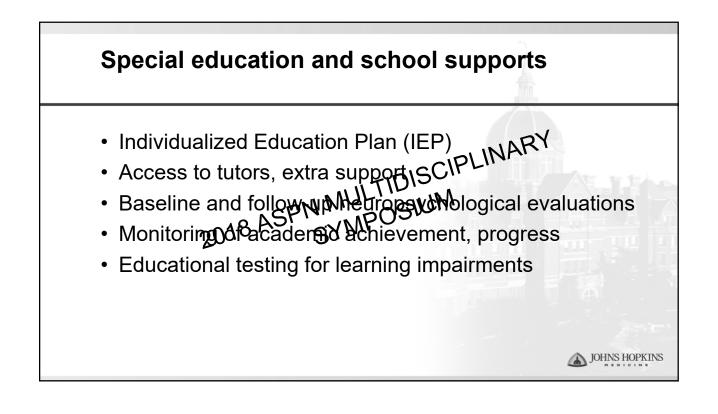
- But...txp group < CKD no txp group at T1 (& = at T2)

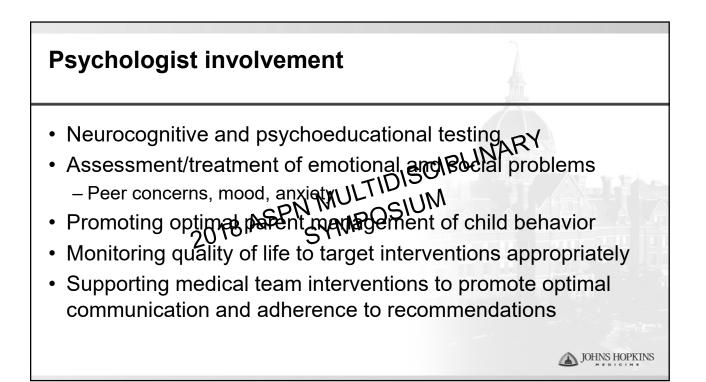
Group	Time 1	Time 2
CKD – Transplant	72.83 (19.95)	85 (19.04)
CKD – No Transplant	87.15 (17.78)	83.55 (23.58)
Control	115.13 (16.49)	118.13 (15.13)

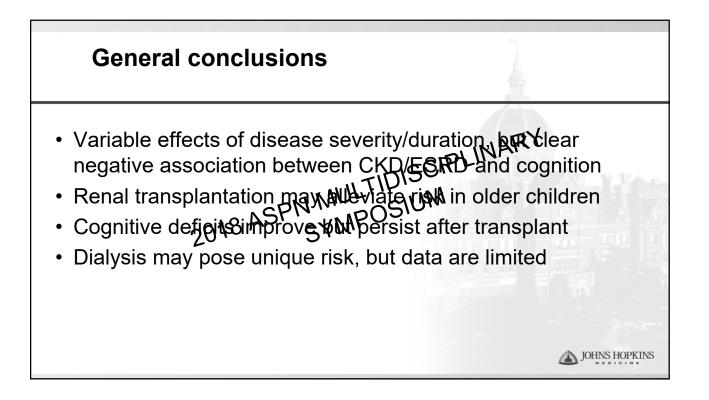
• **Conclusion:** txp helps but does not normalize cognitive functioning

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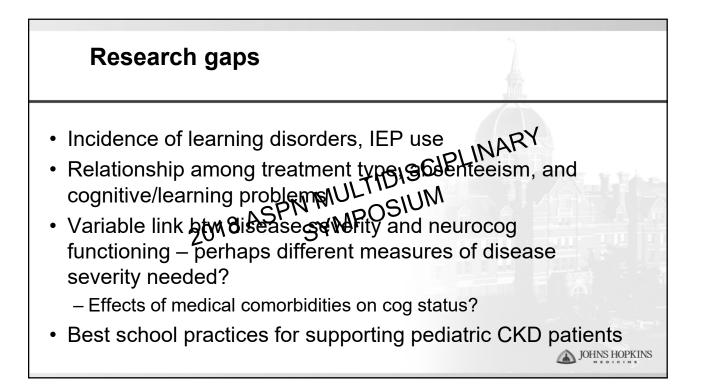




### **Clinical Recommendations**

- Regular neuropsychological assessments
   INARY - Baseline assessment of neurocog functioning at time of diagnosis?
- Advocacy for IEP/special entitleation supports (OHI, LD)
  Reducing emotional distress that may influence functioning at school
- Addressing absenteeism effects related to school, reducing effects of school disruptions
- Optimizing treatment engagement/adherence





**DPKINS** 

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## Thank you!

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