

Are some patients only candidates for a transplant from a living donor?

John S. Gill MD, MS, FRCPC

Professor of Medicine

University of British Columbia, St. Paul's Hospital-Vancouver, B.C.

jgill@providencehealth.bc.ca

Disclosures – John S. Gill

- I have no financial relationships to disclose within the past 12 months relevant to my presentation
- My presentation does not include discussion of off-label or investigational use
- I do not intend to reference unlabeled/unapproved uses of drugs or products in my presentation



The Admissions and Policies Committee of the
Seattle Artificial Kidney Center at Swedish Hospital.

Life Magazine 1962

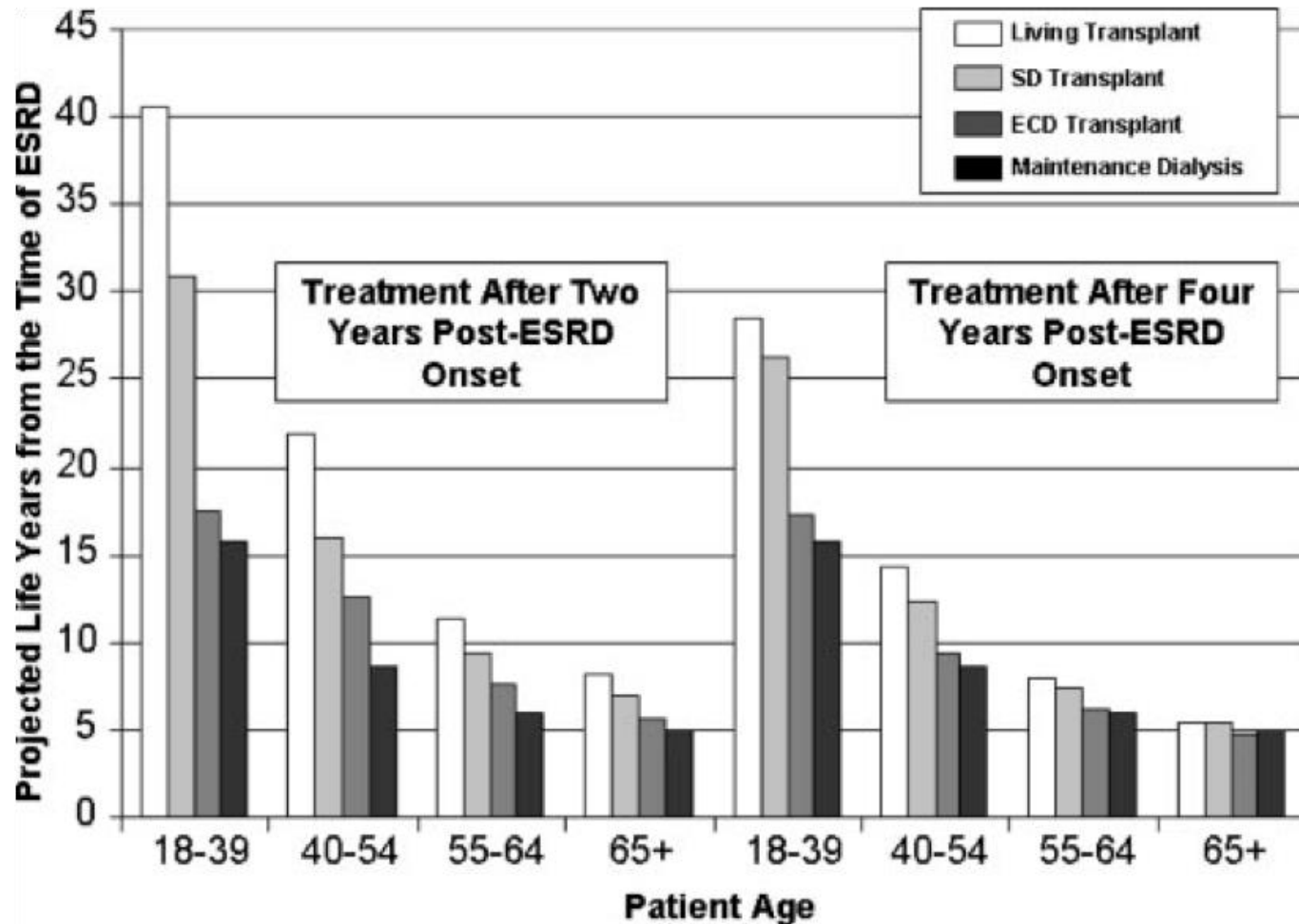
Patients who might only be considered candidates for a living donor transplant

- These are not necessarily exclusive categories
 - Patients with limited life-expectancy
 - Patients in whom the likelihood of death or removal from the waiting list is $>$ than the likelihood of transplantation
 - Patients with high perioperative risk

Why treat people with transplant rather than dialysis?

- Increase survival
- Increase quality of life
- Save health resources

If we delay transplantation in elderly patients ≥ 4 years - it is unlikely that transplantation will increase survival

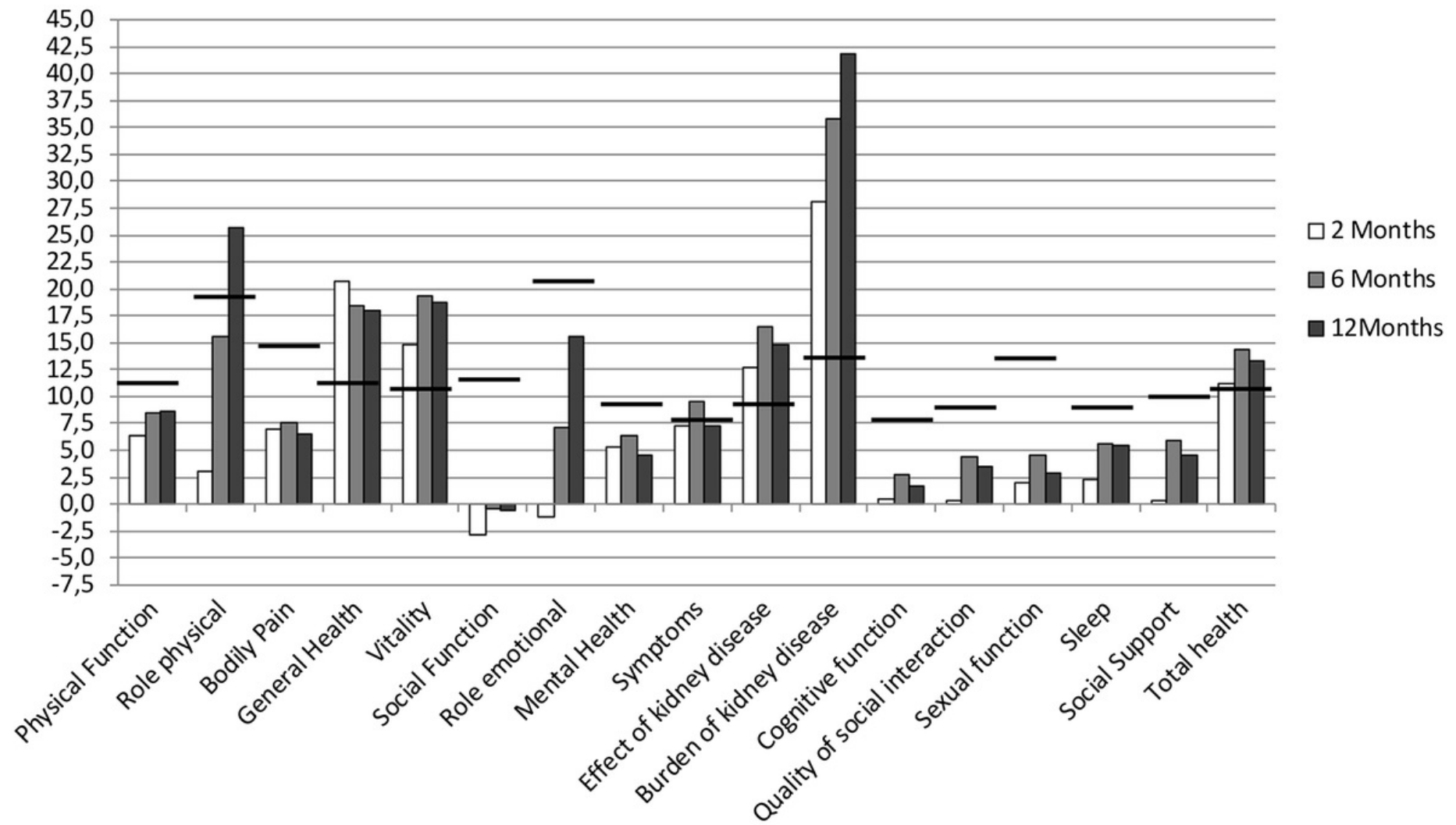


We still expect a quality of life improvement

Improved Health-Related Quality of Life in Older Kidney Recipients 1 Year After Transplantation

Lønning, Kjersti, RN, Msm^{1,2}; Heldal, Kristian, MD, PhD^{2,3}; Bernklev, Tomm, PhD^{2,4}; Brunborg, Cathrine, MSc⁵; Andersen, Marit, Helen, RN, PhD^{1,6}; Lippe, Nanna von, der, MD²; Reisæter, Anna, Varberg, MD, PhD¹; Line, Pål-Dag, MD, PhD^{1,2}; Hartmann, Anders, MD, PhD^{1,2}; Midtvedt, Karsten, MD, PhD¹

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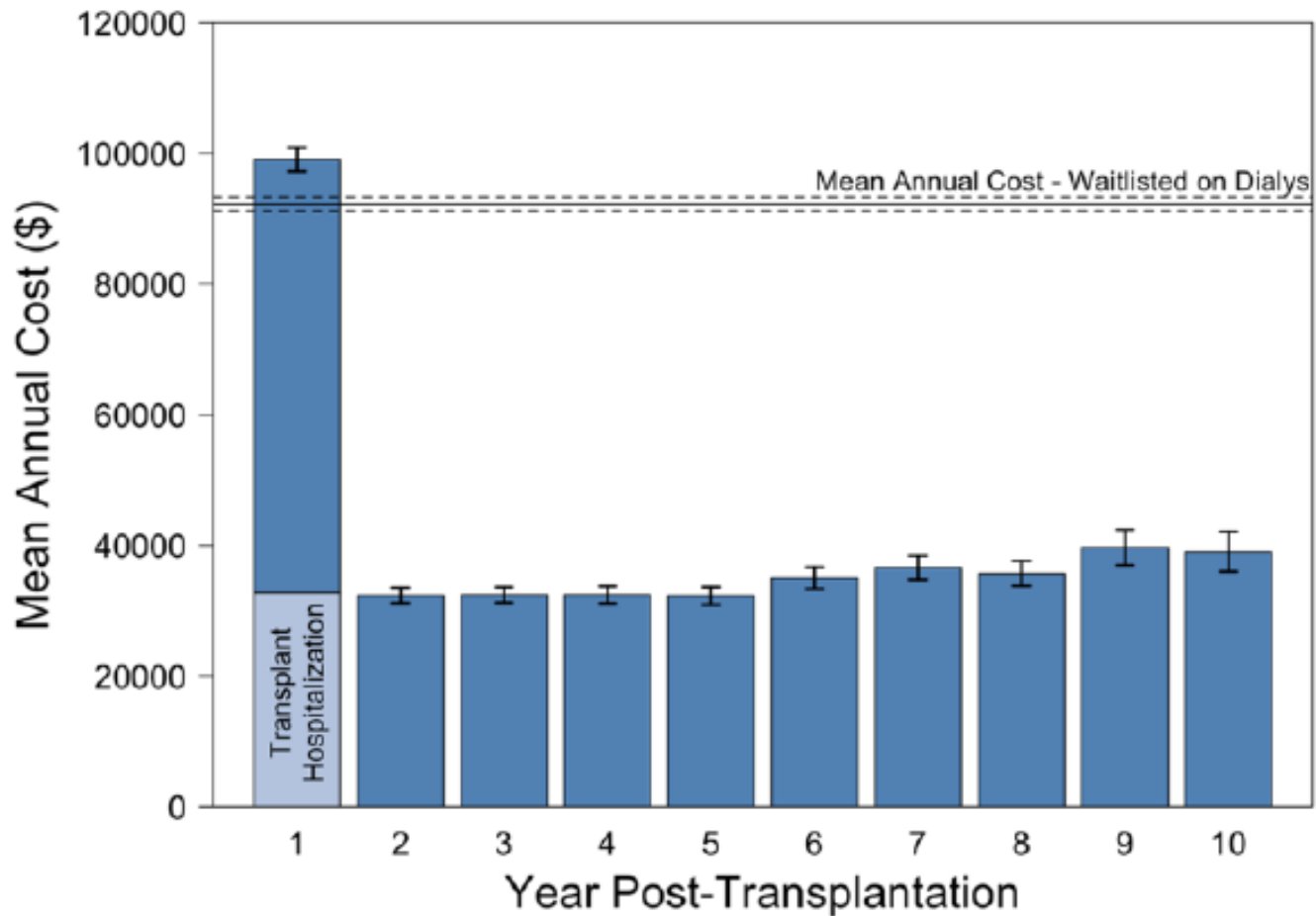
0= reference is last HRQoL evaluation pre kidney transplantation.

Positive values indicate improvement, Clinical cut off, 0.5 SD indicated by black lines

Changes in HRQoL scores at 2, 6, and 12 months after KTx compared to pretransplantation.

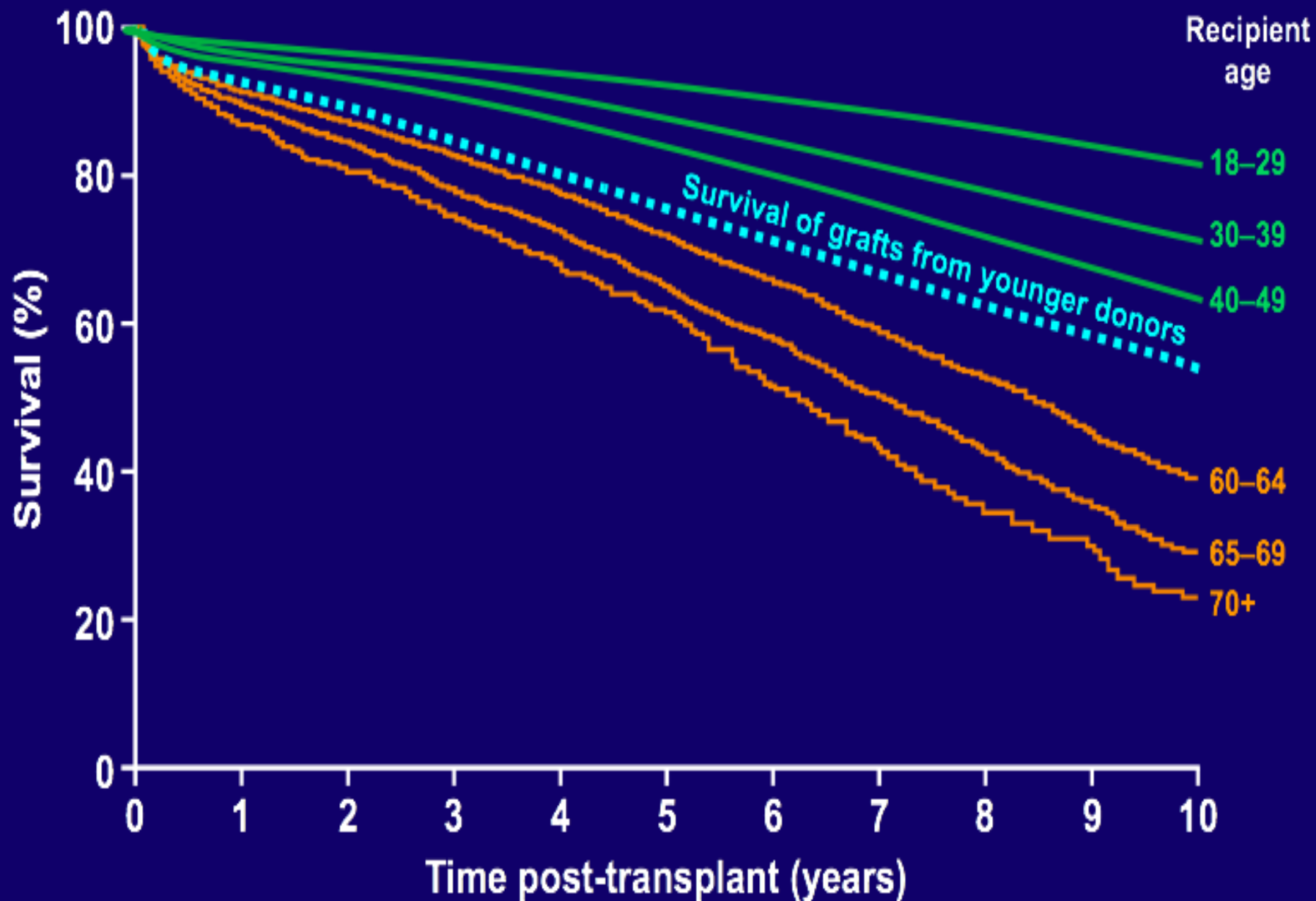
Health care savings:

A elderly transplant must function for two years to “break even”
c/o Matthew Kadatz



Ethical Question?

- When the main benefit is Quality of Life – what is the minimum duration of allograft survival that would warrant the use of a scarcely available deceased donor kidney?
 1. One year ?
 2. Three years ?
 3. Five years ?



Discussion point

- In patients where the primary benefit is QOL and expected post transplant survival is limited (less than some minimal threshold e.g. 3 years), should only LD transplantation be considered?

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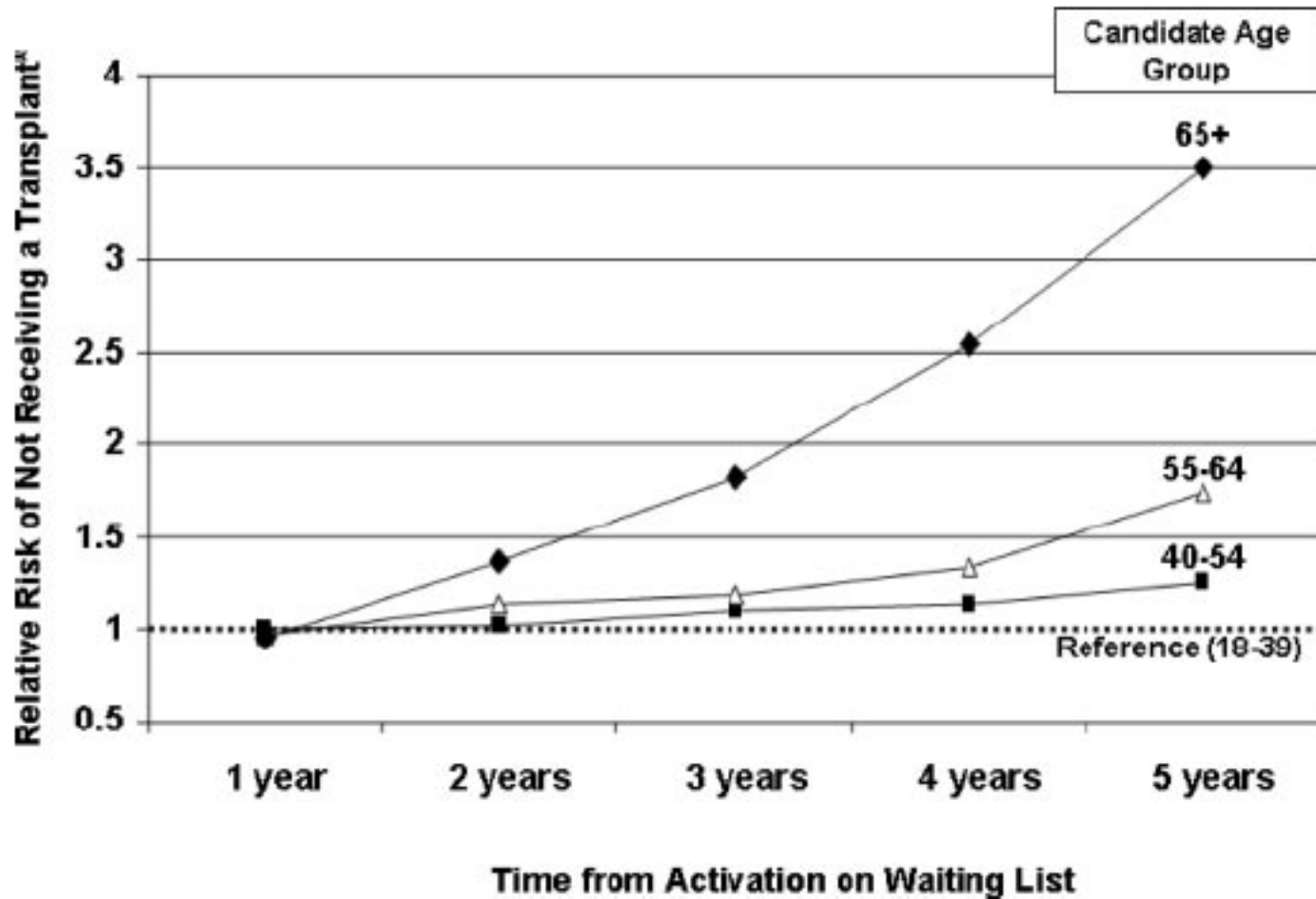
Case: 69 yr male retired accountant on dialysis for 1 year

- “Still helps with books during tax season”
- Mature onset DM diagnosed 3 years ago – oral meds
- Ex- smoker – quit when he started dialysis
- Stroke 2 years ago– recovered, independent of ADLs
- CHF 11 mos ago – Stent to RCA, non-critical LAD lesion
- Rarely “crashes” on dialysis, walks 2 – 3 blocks
- EF 50%, mild AS
- No retinopathy, PVD
- Hypertensive– well controlled
- Gout
- BMI = 30 kg/m²
- Blood Group B, cPRA 30 %



Relative risk of NOT being transplanted is higher in elderly

Schold et al CJASN 1: 532-8, 2006



Probability of transplantation after wait-listing

Schold et al CJASN 1: 532-8, 2006

Time from Wait Listing ^b	Candidate Age (%)			
	18 to 39	40 to 54	55 to 64	65+
1 yr	15.3	15.9	16.7	17.9
2 yr	10.1	10.2	9.9	9.1
3 yr	7.9	7.5	7.3	5.9
4 yr	6.0	5.6	5.2	3.4
5 yr	4.9	4.2	3.3	2.0
6 yr	2.8	2.3	1.8	0.8
None (within 6 yr)	49.2	49.6	50.9	57.7

Rapid transplantation is critical in elderly

- Competing risk of death/ delisting on WL
- Elderly ESRD patients have a limited life expectancy
 - At some point there will be no survival benefit transplantation (irrespective of donor source)

Probability of bad things on waiting list

CJASN 2012 Mar 22

Probability of death on the wait-list or removal from the wait-list by age and race													
Recipient Age		18-39			40-49			50-59			≥60		
Race		White	Black	Other	White	Black	Other	White	Black	Other	White	Black	Other
Cumulative time on the wait-list (years)	1	0.03	0.01	0.02	0.04	0.01	0.02	0.06	0.02	0.04	0.07	0.03	0.03
	3	0.13	0.06	0.07	0.16	0.08	0.08	0.20	0.11	0.13	0.27	0.14	0.15
	5	0.26	0.17	0.18	0.29	0.19	0.19	0.36	0.24	0.26	0.47	0.31	0.36

This patient

- Equal likelihood of deceased donor transplant or death/removal from WL
- Is a candidate for high KDPI kidney but blood type and sensitization make it unlikely he will be rapidly receive a transplant
- Accepted only for LD transplantation

Discussion point

- Should such patients be prioritize for high KDPI kidneys ?

Patients who might only be considered candidates for a living donor transplant

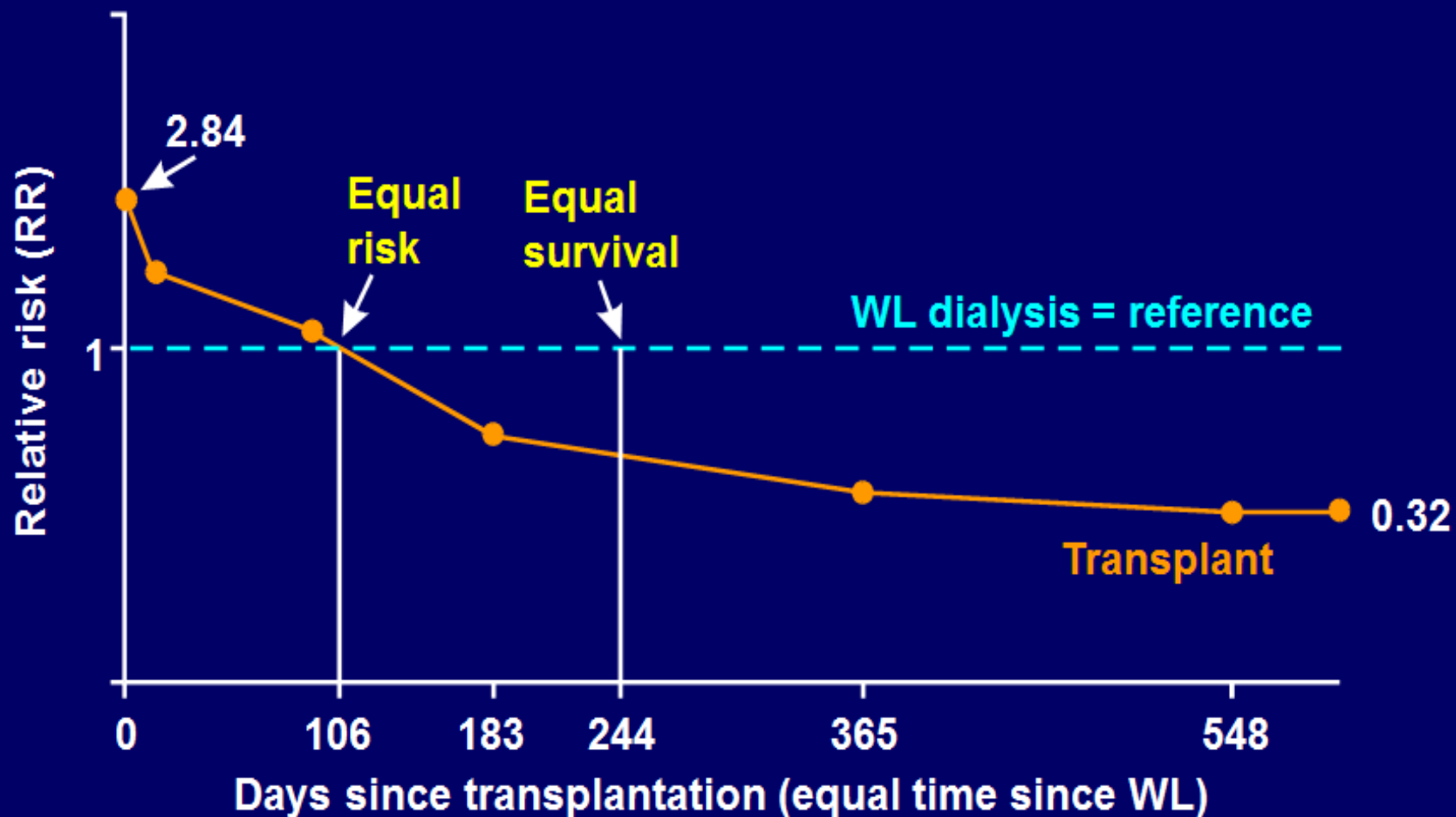
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Peri-operative risk

- Some patients may be deemed ineligible for kidney transplantation (KTX) not because they won't benefit from KTX but because they are felt to have an unacceptably high peri-operative risk



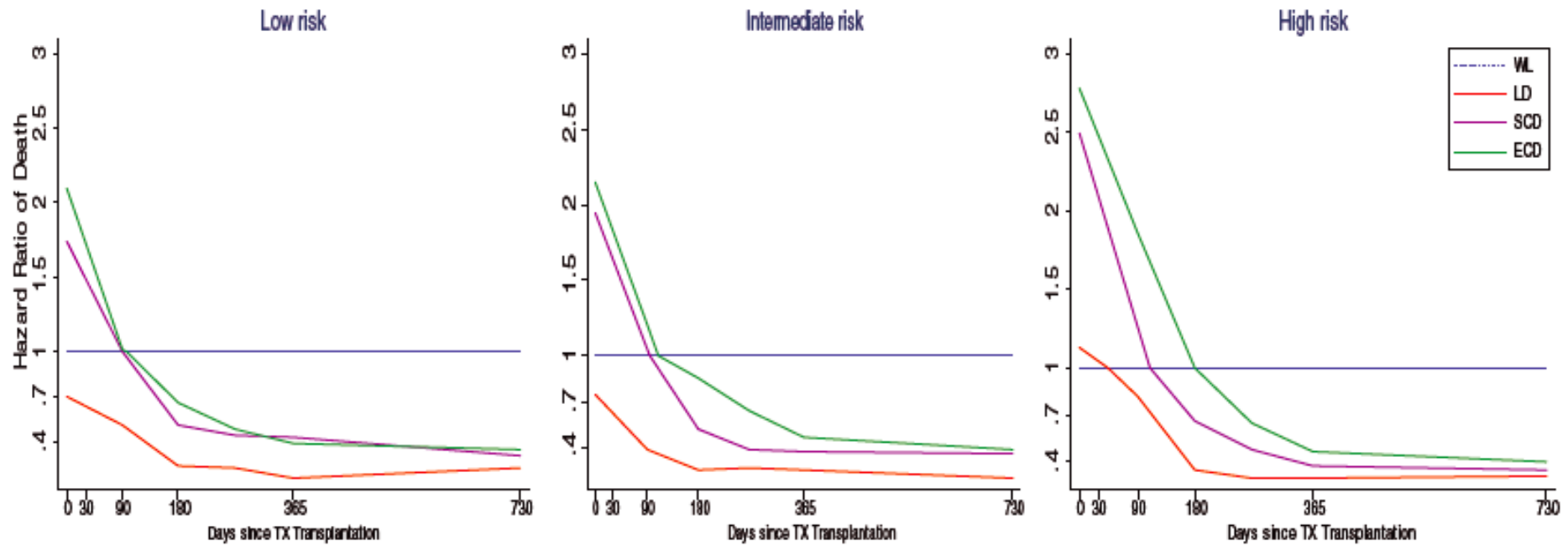
Mortality RR* for 23,275 first cadaveric transplant versus 46,164 waitlisted (WL) dialysis patients



*Adjusted for age, sex, race, end-stage renal disease (ESRD) cause, WL year, region and time to WL

MV adjusted risk of death in transplant vs wait-listed elderly patients

Gill et al. Am J Transplant. 2013 Feb;13(2):427-3.



Peri-operative risk in elderly - dramatically reduced with LD Tx

Gill et al. Am J Transplant. 2013 Feb;13(2):427-

3.

	Living Donor		SCD		ECD	
	Death Rate per 100 patient years in first year	Days to equal Survival	Death Rate per 100 patient years in first year	Days to equal Survival	Death Rate per 100 patient years in first year	Days to equal Survival
Low	3	0	8	203	10	264
Inter.	3	0	8	285	14	304
High	6	76	11	368	16	521

Conclusions

- Given the reality of an inadequate supply of deceased donor kidneys to meet the need for kidney transplantation, some patients who will benefit from transplantation cannot be offered a deceased donor transplant
- These patients may be candidates only for a living donor transplant
- Donor must understand expected outcomes for the transplant

Thank You

- jgill@providencehealth.bc.ca