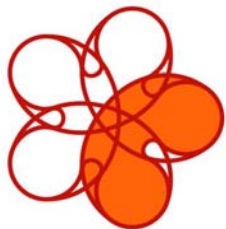


Thinking outside the unit: a kidney transplantation update for the dialysis facility

14 October 2010
ESRD Network of New England 22nd Annual Meeting
Sturbridge, MA



National Kidney
Foundation™

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SCHOOL OF
MEDICINE

Objectives

- 1. Understand the roles of kidney transplantation for patients treated with dialysis & pre-emptive transplant for CKD patients.**
- 2. Understand the UNOS process for prioritizing patients on the kidney transplant waiting list.**
- 3. Understand how to counsel patients regarding kidney transplantation.**

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Dialysis and transplantation are considered complementary rather than an absolute choice of one modality over another.

Stage 1-3 CKD

Stage 4-5 CKD

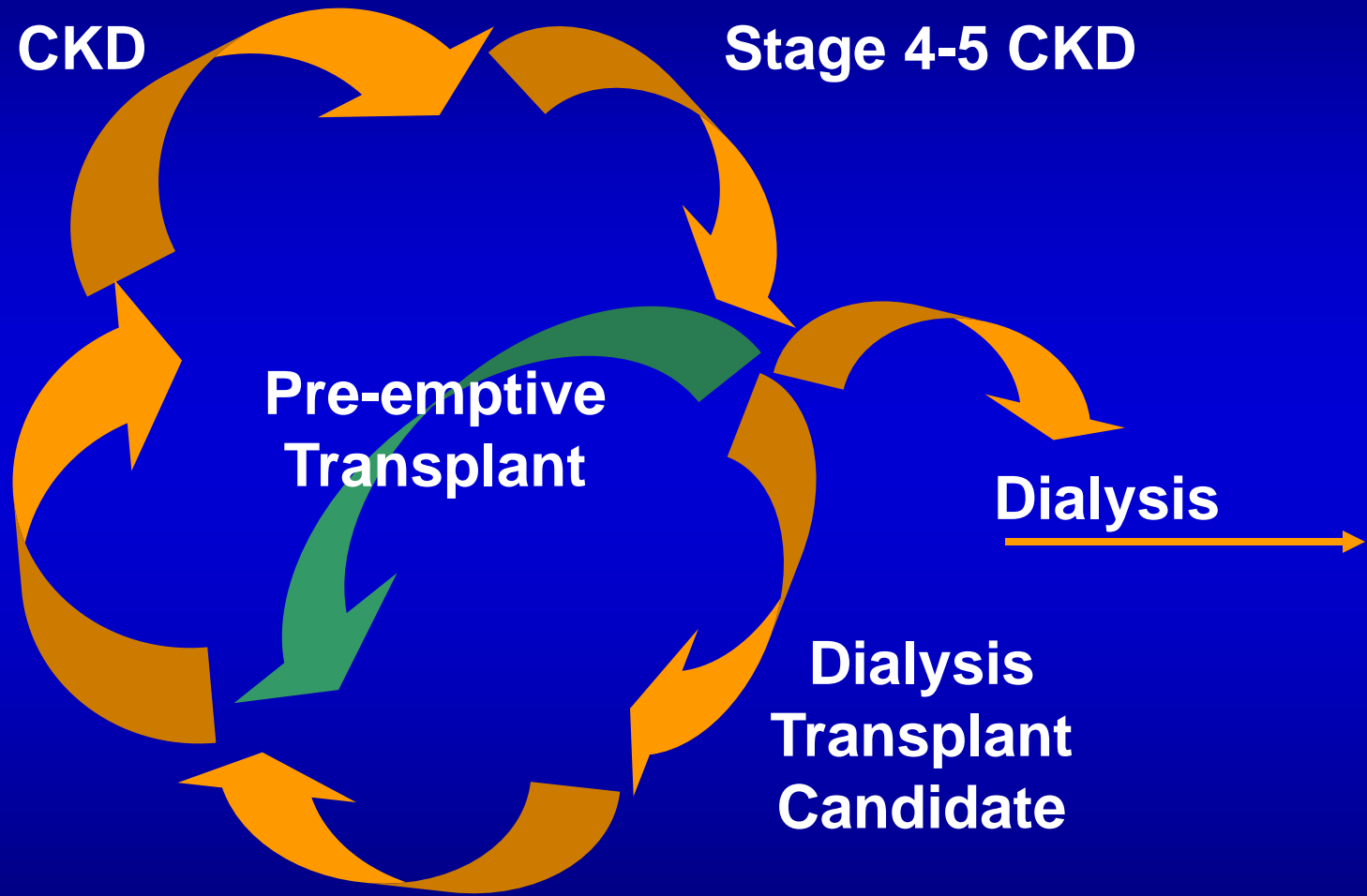
**Transplant
Recipient**

**Pre-emptive
Transplant**

Dialysis

**Dialysis
Transplant
Candidate**

Transplant



What Are the Contraindications to Kidney Transplantation?*

- 1) Metastatic cancer.**
- 2) Ongoing or recurring infections that are not effectively treated.**
- 3) Serious cardiac or other ongoing insufficiencies that create an inability to tolerate transplant surgery.**
- 4) Serious conditions that are unlikely to be improved by transplantation as life expectancy can be finitely measured.**
- 5) Demonstrated patient noncompliance.**
- 6) Potential complications from immunosuppressive medications are unacceptable to the patient.**

*** If in doubt referral to transplant center is optimal.**

Areas of Uncertainty – Refer to Transplant Center

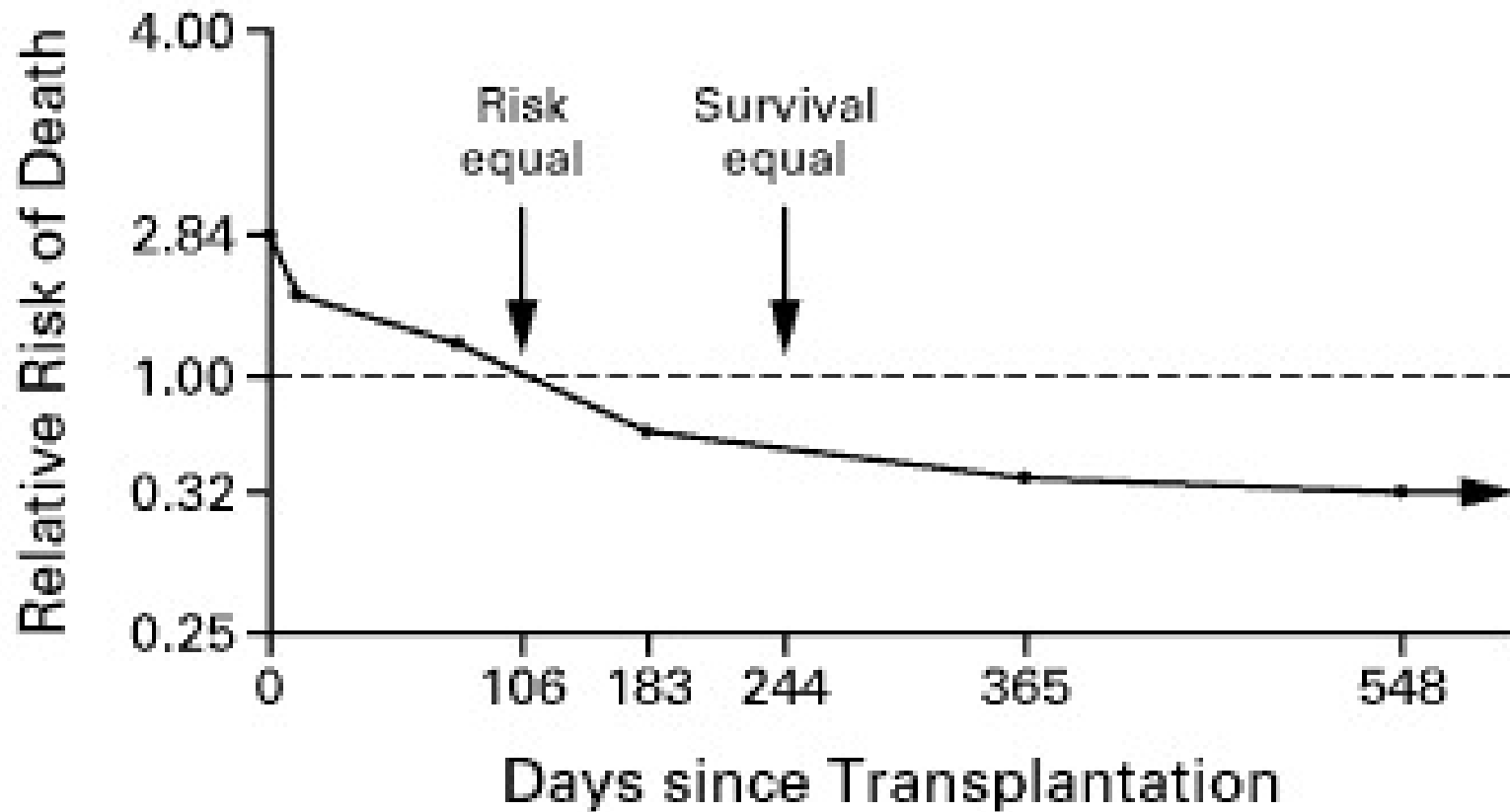
- 1) High BMI**
 - 2) HIV infection**
 - 3) Spectrum of noncompliance**
 - 4) Tobacco abuse**
 - 5) Substance abuse**
- Referral in these instances will best serve the patient, in general, as the transplant team can determine eligibility and also may be able to offer education and resources to address the condition. Lastly, the patient may be more motivated to address the problem after review by the transplant center.**

What are the advantages of kidney transplantation?

Prolonged Survival

Improved Quality of Life

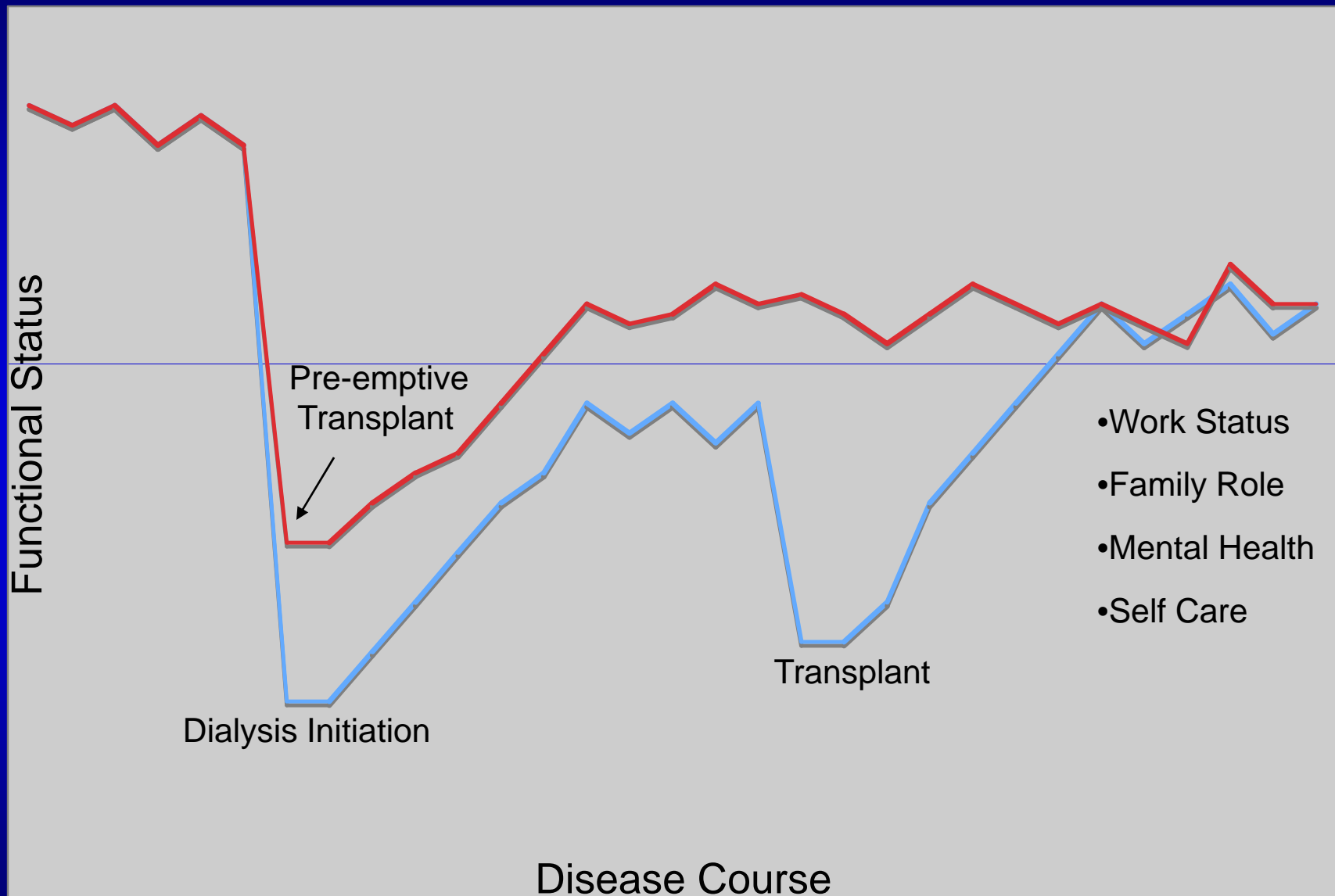
Survival: Dialysis versus First Cadaveric Kidney Transplant



Adjusted Relative Risk of Death among 23,275 Recipients of a First Cadaveric Transplant.

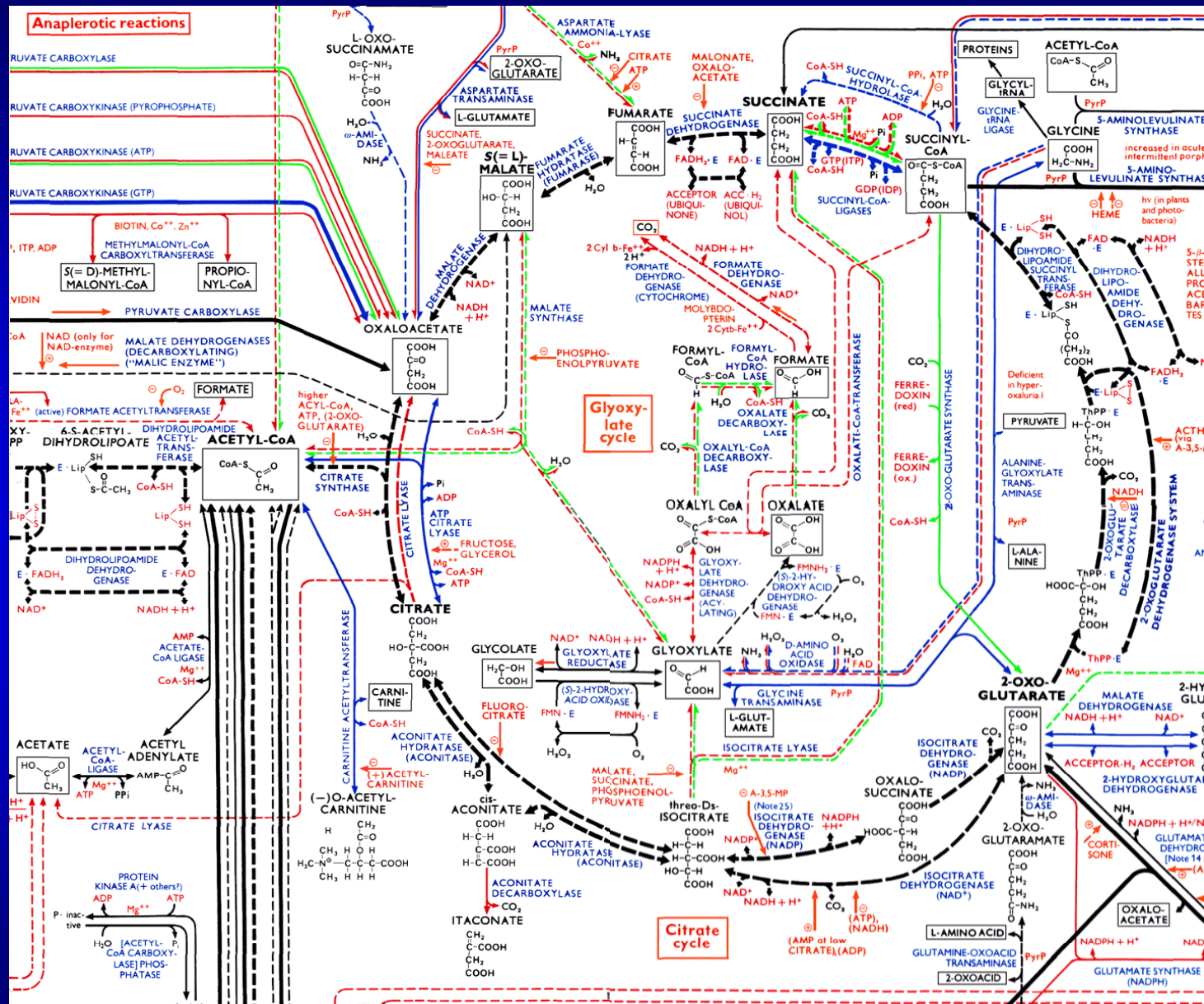
Wolfe RA et al. N Engl J Med 341:1725-1730,1999

Functional Status: Dialysis and Transplantation



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Kreb's Cycle

Kidney Transplant Deceased Donor Wait List

Although UNOS formulas are complex, understanding major themes and how they might change in the future is practical and important for the dialysis unit staff.



United Network for Organ Sharing www.unos.org

What is the current Deceased Donor Kidney Allocation Policy?

The current kidney allocation policy considers characteristics of both the donor and the transplant candidate in allocating kidneys fairly, efficiently and effectively. A combination of factors, working together, determines who receives which organ.

- Length of time spent on the waiting list
- Whether the potential organ candidate is a child
- Body size of both donor and candidate
- HLA match between donor and candidate
- Blood type (ABO)
- Panel Reactive Antibody (PRA) - in % to HLA

United Network for Organ Sharing www.unos.org

<http://optn.transplant.hrsa.gov/policiesAndBylaws/policies.asp>

What is the current Deceased Donor Kidney Allocation Policy?

Prioritization using a Point System, see examples below.

- Points for time on the active wait list
- 4 points for candidates less than 11-years old
- 3 points for candidates 11 to < 18 years old
- 1 or 2 points for DR match (HLA)
- 4 points for PRA > 80%
- Absolute trump for 0 ABDR mismatch

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What is the current Deceased Donor Kidney Allocation Policy?

ABO Blood Type, a major theme:

- O blood type donor to O blood type recipient*
- B blood type donor to B blood type recipient*
- Nuances A2 donor to O recipient are not considered in the current policy

* Unless Zero Antigen Mismatch

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<http://optn.transplant.hrsa.gov/policiesAndBylaws/policies.asp>

What is the current Deceased Donor Kidney Allocation Policy?

Zero Antigen Mismatch or 6 antigen match,
a major theme:

Donor Phenotype	Recipient Phenotype
A1, A31	A1, A31
B8, B14	B8, B14
DR3, DR 4	DR3, DR 4

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What is the current Deceased Donor Kidney Allocation Policy?

Zero DR Mismatch or a DR Match,
a major theme:

Donor Phenotype	Recipient Phenotype
A23, A - (blank)	A1, A9
B7, B8	B7, B8
DR3, DR 4	DR3, DR 4

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What is an Expanded Criteria Kidney Donor?

Donor Condition	Age <10	Age 10-39	Age 40-49	Age 50-59	Age ≥ 60
CVA + HTN+ Creat > 1.5				X	X
CVA + HTN				X	X
CVA + Creat > 1.5				X	X
HTN + Creat > 1.5				X	X
CVA					X
HTN					X
Creat > 1.5					X
None of the above					X

X = Expanded Criteria Donor

CVA = CVA was cause of death

HTN = history of hypertension at any time

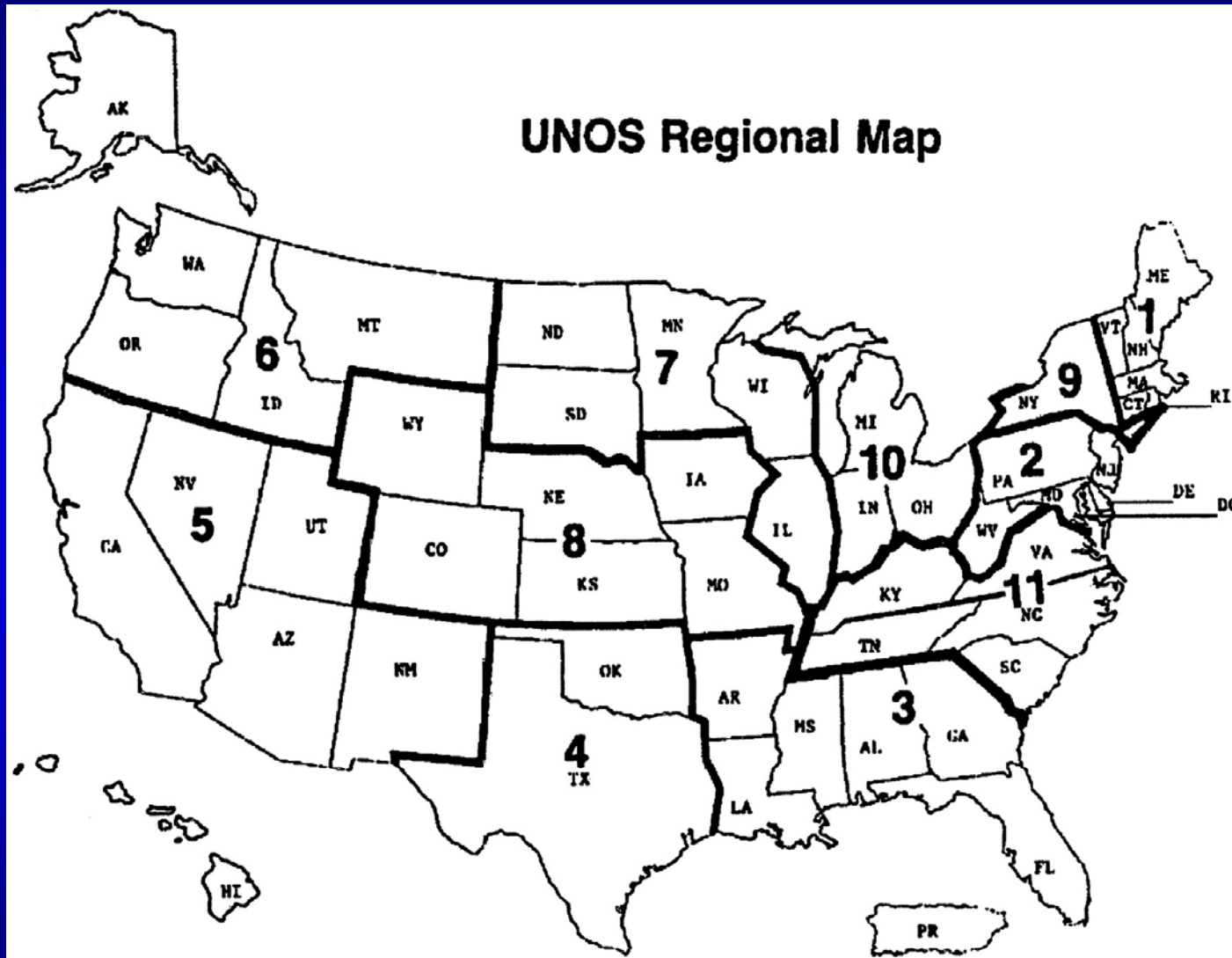
Creat > 1.5 = Serum Creatinine > 1.5 mg/dL

22 June 2010 Policy 3.5.1

United Network for Organ Sharing www.unos.org

Should my patient consider an Expanded Criteria Kidney Donor?

**Refer to your transplant center,
regarding individual Risks and Benefits of
Expanded Criteria Donor Listing.**



United Network for Organ Sharing www.unos.org

Kidney Allocation Challenges

- Heart, Lung and Liver Transplants all have in common no other life saving therapy.
- The focus for Heart, Lung and Liver Transplant Allocation is preventing death on the waiting list and maximizing post-transplant survival.
- **Chronic kidney failure mortality is generally related to co-morbidities, and complications rather than a direct consequence of organ failure.**
- **Kidney transplant candidates with the highest wait-list mortality have limited incremental improvement in survival with kidney transplantation versus ongoing dialysis.**

Adapted from United Network for Organ Sharing www.unos.org

<http://optn.transplant.hrsa.gov/policiesAndBylaws/policies.asp>

Kidney Allocation System Case

**19-year-old 0-ABDR mismatch donor
Kidney to 79-year-old with many co-
morbidityes.**

Excerpt from UNOS Public Forum on Kidney Allocation
United Network for Organ Sharing www.unos.org

Concepts Considered in the Development of Potential New Kidney Allocation Systems

1. Donor Profile Index (DPI)

2. Kidney Allocation Scores (KAS)

- Points for wait time

- Life Years From Transplant (LYFT) = predicted mean survival with minus without transplant.

3. Modifications of the above.

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Specific Questions about Deceased Donor Kidney Allocation Policy?

This Discussion is intended to provide background information for dialysis unit staff. Specific questions should be referred to the local transplant center.

United Network for Organ Sharing www.unos.org

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Why should busy dialysis unit staff discuss transplantation with the dialysis patient?

Do the right thing.

**This is part of Medicare and Medicaid
Conditions of Coverage for Dialysis
Facilities.**

Transplantation Excerpts from Medicare and Medicaid Conditions of Coverage for Dialysis Facilities

- 1) Patient's Right: to be informed about all treatment modalities and settings**
- 2) Patient Assessment: suitability for a transplantation referral**
- 3) Plan of Care: Transplantation Status**

Transplant and Organ Donation Education: What matters?

- 1) Early through multiple channels
- 2) Unbiased and accurate
- 3) Tailored to individual
- 4) Use or refer to effective materials/websites
www.kidney.org
www.unos.org
www.bidmc.org/transplant
- 5) Well prepared educators

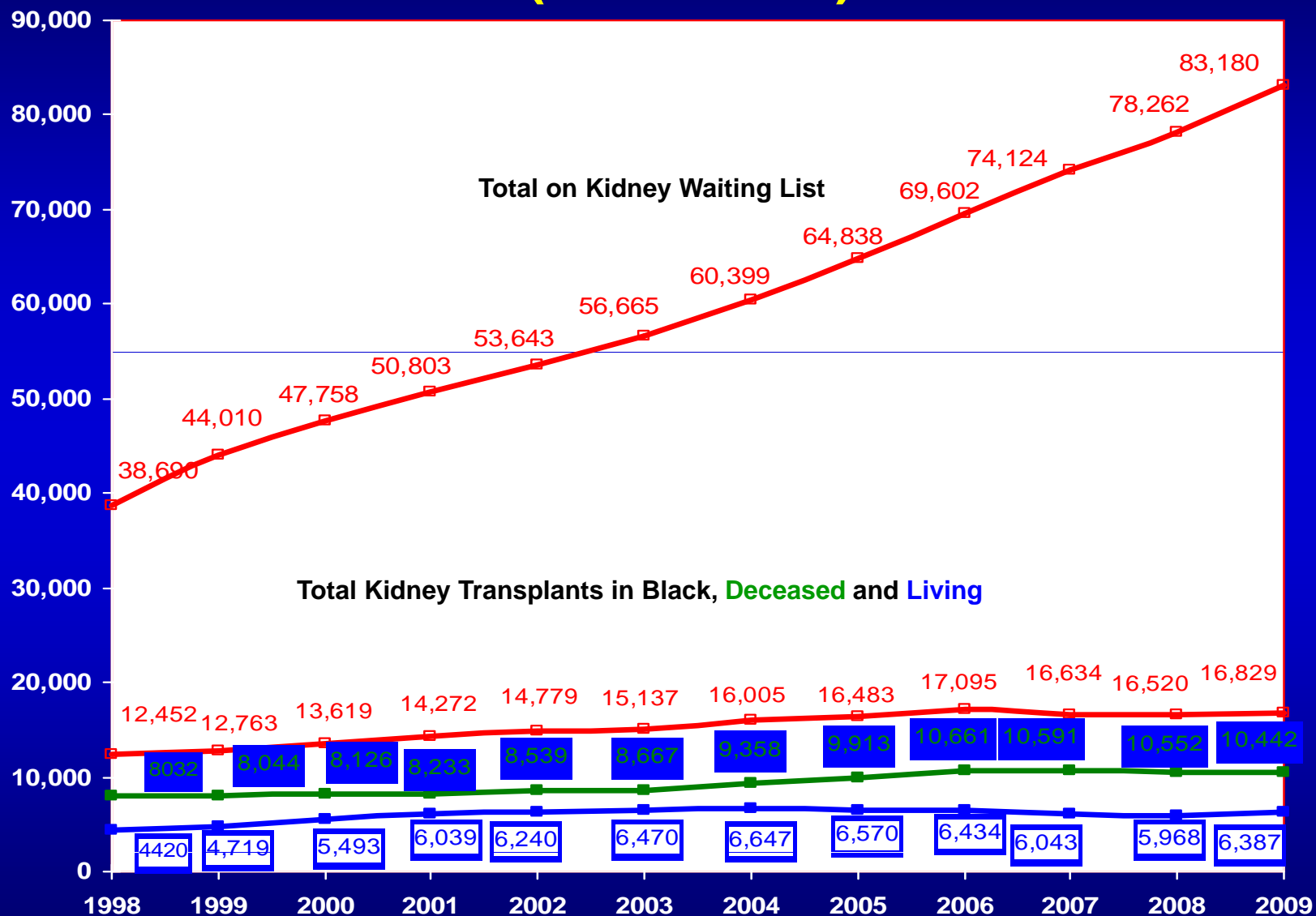
Do you have a kidney donor?

Why should your patient ask others to consider living donation?

- 1) Shorter waiting time than deceased donor list**
- 2) More time to prepare for scheduled living-donor transplant**
- 3) Better transplant success rates in general**

Request kidney transplant recipient return to the dialysis unit to share positive experience.

Kidney Transplants and Waiting List (U.S.) (1998-2009)



Data adapted from www.unos.org

**END THE
WAIT!**

Aims:

- **Improve outcomes of first transplants**
- **Increase deceased donation**
- **Increase living donation**
- **Improve the system of donation and transplantation throughout the U.S.**



**National Kidney
Foundation®**

**END THE
WAIT!**

Tack

Vielen Dank

Obrigado

Merci

ありがとうございます

Bedankt

Takk

感謝您

谢谢

Terima Kasih

Grazie

ขอบคุณ

Спасибо

Thank You

Kiitos

Tak

Teşekkür Ederiz

감사합니다

Gracias

Dziękujemy

Σας ευχαριστούμε