Transplant First!

Ways to help patients get transplanted

Ideally preemptively

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University of California, Davis
February 10, 2020
Learning Objectives:

• Scope of the problem

• Ways to help patients transplanted
  • Early referral
  • Finding living donors
  • Decreasing wait time for deceased donor kidneys
Incident ESRD in the United States

124,500 new ESRD cases in 2017

OPTN data
USRDS 2018 Annual Data Report
More are getting transplanted each year

Number of kidney transplants in the US

- 2003: 15,000
- 2004: 15,500
- 2005: 16,000
- 2006: 16,500
- 2007: 17,000
- 2008: 17,500
- 2009: 18,000
- 2010: 18,500
- 2011: 19,000
- 2012: 19,500
- 2013: 20,000
- 2014: 20,500
- 2015: 21,000
- 2016: 21,500
- 2017: 22,000
- 2018: 22,500
- 2019: 23,000

2019 OPTN data
2019 OPTN data
CKD to transplant

Or

Preemptive transplant

chronic kidney disease

transplant

death
CKD to transplant

Preemptive transplant

- Benefits of preemptive transplants
  - Fewer complications
  - Better patient survival

Tan, JC et al. *CJASN* 2015
Preemptive kidney transplantation

- 3,500 preemptive transplants in 2016
  - 15% of all kidney transplants
  - 31% of living donor transplants
  - 2.8% of incident ESRD patients

Jay, CL et al. *Transplantation* 2016; 100: 1120
Preemptive kidney transplant

Many stars need to align

Chronic kidney disease

Early diagnosis of CKD

Slow progress

Early referral to transplant center

Availability of donor

Expeditied evaluation

Preemptive kidney transplant
3,500 preemptive transplants out of 125,000 new ESRD patients
Learning Objectives:

• Scope of the problem

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  • Early referral
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  • Decreasing wait time for deceased donor kidneys
Early referral to transplant center

- Chronic kidney disease
  - Stage 2: 60-89 mL per minute
  - Stage 3: 30-59
  - Stage 4: 15-29
  - Stage 5: < 15

- Start thinking about living donors at GFR 30 ml/min
- Referral to transplant centers at GFR 25 ml/min
But doc, I feel fine. Why am I being referred to the kidney transplant program?

• Decline in GFR may accelerate
• Transplant evaluation takes time
• Eligible for wait listing: 20 ml/min
• Waiting time for deceased donors is long
Median wait time in years by blood type for deceased donor kidney transplant at UC Davis

<table>
<thead>
<tr>
<th>Blood Type</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB</td>
<td>1.5</td>
<td>1.4</td>
</tr>
<tr>
<td>A</td>
<td>3.3</td>
<td>3.8</td>
</tr>
<tr>
<td>O</td>
<td>4.2</td>
<td>4.7</td>
</tr>
<tr>
<td>B</td>
<td>4.8</td>
<td>5.6</td>
</tr>
</tbody>
</table>
Help patients understand waiting time

• Individualized risk calculator on SRTR website (Scientific Registry of Transplant Recipients)

Calculate Your Risks

What are your likely outcomes on the kidney transplant waiting list?

Choose the Transplant Program:
University of California Davis Medical Center (CA)

Adjust for Program-Specific Transplant Rate

Choose your age:
65

Choose your gender:
- Male
- Female

Choose your race:
- Asian
- Black
- Native American
- Pacific Islander
- White
- Multiracial

Choose your ethnicity:
- Latino
- Not Latino

Enter your height:
- Feet: 5
- Inches: 8

Enter your weight:
Pounds: 150

Choose your blood type:
- O

I know my antibody level (cPRA)

How many years have you been on dialysis?
- 0 Years

Check any additional health issues:
- Diabetes
- Stroke
- Medications for high blood pressure
- Medications for emphysema
- Cancer
- Poor circulation of the blood vessels outside the heart or brain (peripheral artery disease)
Calculate Your Risks

What are your likely outcomes on the kidney transplant waiting list?

Outcomes in 5 Years

University of California Davis Medical Center (CA)
Adjusted for Program-Specific Transplant Rate
65-Year-Old White / Not Latino Male
Height: 5' 8" Weight: 150 lbs Blood Type: O cPRA: 0
0 Years on Dialysis
Health Issues: Diabetes / High Blood Pressure
2020-01-20 Version 0.2.0

Of patients like you:
18% will get a deceased-donor transplant
47% will die or become too sick for transplant
35% will still be waiting
Learning Objectives:

• Scope of the problem

• Ways to help patients transplanted
  • Early referral
  • Finding living donors
  • Decreasing wait time for deceased donor kidneys
Help patients identify living donors

- Role of primary nephrologists and dialysis units
  - Encourage early discussion with family and friends
  - Help allay fears regarding living donation

Fishbane and Nair. CJASN 2018, 13: 1280-1282
Where to start?

I don’t know how to tell my family that I need a kidney.
Where to start?

A CONVERSATION CAN SAVE A LIFE.

Whether you need a kidney or are considering donation, let us help you start the conversation.

(En Español)
ALAN, AISHA, AND FACEBOOK
How social media helped connect a recipient & donor

ANGELICA & EVA HALE
Recipient and donor/family member

TRACY & DR. SCANTLEBURY
Kidney donor & America’s 1st Black Female Transplant Surgeon

CHRISTOPHER
Kidney donor/friend

CINDY & MARIA
Recipient and donor/family member

DR. WELSH
Kidney donor/altruistic

JASON
Kidney donor/aquaintance

TRACY & DR. SCANTLEBURY (60 SECOND PSA)

ALAN & AISHA
A Kidney recipient & his spouse share their tips on finding a living donor

CLAUDIA
Kidney Recipient

MATI
Kidney Recipient
Where to start?

My husband wants to donate, but he has diabetes.

My daughter wants to donate, but she is only 17
Role of living donor champions

• Advocates on behalf of patients to identify and recruit living donors

• Many transplant centers offer education materials or classes to train LD champions
  • Share the patient’s story
  • Outreach with mailer/flyer and social media
  • Event organizing
Allaying fear regarding living donation

Donating a kidney is risky. I do not want someone to take a risk for me.

I have kidney failure from diabetes. I don’t want my children to donate since they will be at risk, too.
Allaying fear regarding living donation

• Help reassure the patients

• Living donors undergo rigorous evaluation
  • Medical
  • Psychosocial

• LD evaluation helps identify health problems early

• ~ 60-70% of LD applicants get ruled out
Discussing risks of living donation

• Living donation is very safe

• 3 in 10,000 surgical mortality (lower than liposuction)

• 25-35% reduction in GFR

• Slightly increased risk in lifetime ESRD

Tan, JC et al. *CJASN* 2015
Allaying fear regarding living donation

Donating a kidney is risky. I do not want someone to take a risk for me.

I have kidney failure from diabetes. I don’t want my children to donate since they will be at risk, too.

Transplant programs take the health and welfare of living donors very seriously. It does not hurt to at least get evaluated.
Help is available

My sister is interested in donating, but she cannot afford to travel here.
Help is available

Our Mission
To reduce the financial disincentives to living organ donation

• Reimbursement for potential living donors
  • Up to $6000
  • Travel
  • Lodging and meals
More help potentially on the way

• Expanded financial protection under AAKH
  • Lost wages
  • Child care and elder care

• Living Donor Protection Act 2019
  • Job protection for medical leave after donation
  • Prohibits higher premium on life, disability and long-term care insurance
Learning Objectives:

• Scope of the problem

• Ways to help patients transplanted
  • Early referral
  • Finding living donors
  • Decreasing wait time for deceased donor kidneys
Lower wait time for deceased donor kidneys

• Transplant centers vary in waiting time
  • OPO boundaries
  • Difference in organ acceptance

• Shorter waiting time = higher chance of transplant

• Refer patients to centers with lower wait time
Calculate Your Risks

What are your likely outcomes on the kidney transplant waiting list?

Choose the Transplant Program:
University of California Davis Medical Center (CA)

Enter your height:
Feet: 5
Inches: 8

Enter your weight:
Pounds: 150

Choose your blood type:
0

I know my antibody level (cPRA)

How many years have you been on dialysis?
0 Years

Check any additional health issues:
- Diabetes
- Stroke
- Medications for high blood pressure
- Medications for emphysema
- Cancer
- Poor circulation of the blood vessels outside the heart or brain (peripheral artery disease)
Lower wait time for deceased donor kidneys

- Non-conventional deceased donor kidneys
  - High KDPI (Kidney Donor Profile Index) kidneys
    - 9% of all deceased donor kidneys
    - Older donors
    - Donors with comorbidities
  - Donors with increased infectious risks
    - 28% of all deceased donor kidneys and increasing!

- Important to keep an open mind
Increased infectious risk donors

Doc, I got a phone call last night from UC Davis Transplant Center. They said that they have a kidney transplant for me.

What happened? Did you not take the offer?

They told me that the kidney came from a donor who used IV drug and had increased risk for viral infection. I was worried.
Increased infectious risk donors

• Higher risk of HIV, HCV, HBV transmission despite negative screening tests (window period infection)

• Include the following:
  • IV drug users
  • MSM
  • Sex workers
  • incarceration
<table>
<thead>
<tr>
<th>Virus</th>
<th>Serology</th>
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<tbody>
<tr>
<td>HIV</td>
<td>1-2 wks</td>
</tr>
<tr>
<td>HCV</td>
<td>~ 7 wks</td>
</tr>
<tr>
<td>HBV</td>
<td>5-7 wks</td>
</tr>
</tbody>
</table>

NAT reduces window period

<table>
<thead>
<tr>
<th></th>
<th>serology</th>
<th>NAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>1-2 wks</td>
<td>5-6 days</td>
</tr>
<tr>
<td>HCV</td>
<td>~ 7 wks</td>
<td>3-5 days</td>
</tr>
<tr>
<td>HBV</td>
<td>5-7 wks</td>
<td>20-22 days</td>
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</table>

Estimated risk of window period infection

HIV

<table>
<thead>
<tr>
<th>Category</th>
<th>Serology</th>
<th>NAT</th>
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</thead>
<tbody>
<tr>
<td>IV drug users</td>
<td>0.12%</td>
<td>0.05%</td>
</tr>
<tr>
<td>MSM</td>
<td>0.10%</td>
<td>0.04%</td>
</tr>
<tr>
<td>Sex workers</td>
<td>0.07%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Incarceration</td>
<td>0.02%</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

OPTN/UNOS
Briefing Paper on Guidance on Explaining Risk Related to Use of PS Increased Risk Donor Organs
Estimated risk of window period infection

<table>
<thead>
<tr>
<th></th>
<th>serology</th>
<th>NAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV drug users</td>
<td>3.00%</td>
<td>0.32%</td>
</tr>
<tr>
<td>MSM</td>
<td>0.33%</td>
<td>0.04%</td>
</tr>
<tr>
<td>sex workers</td>
<td>1.20%</td>
<td>0.12%</td>
</tr>
<tr>
<td>incarceration</td>
<td>0.07%</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

OPTN/UNOS Briefing Paper on Guidance on Explaining Risk Related to Use of PS Increased Risk Donor Organs
Risk mitigation

• In the unlikely event of transmission
  • Cure is possible for hepatitis C
  • Chronic suppression for hep B and HIV
### Increased infectious risk donors

<table>
<thead>
<tr>
<th>1994 guideline for high risk donors</th>
<th>2013 guideline for increased risk donors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should be excluded from organ donations</td>
<td>Risk should be explained to potential recipients</td>
</tr>
</tbody>
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What happened? Did you not take the offer?

They told me that the kidney came from a donor who used IV drug and had increased risk for viral infection. I was worried.

The risk is very low and less than complications from staying on dialysis.
In 2018, 27.1% of all deceased donors were considered “increased risk”
Take home messages

• Early referral to transplant programs

• Living donors help ensure preemptive transplants

• Living donation is generally very safe

• Resources are available to help living donors

• Kidneys from increased risk donors help reduce waiting time