Transplant Candidate Evaluation
Assessing if Transplant is for You

Kidney Transplant Program
Medical Arts Pavilion 2
The Christiana Care Way

We serve our neighbors as respectful, expert, caring partners in their health. We do this by creating innovative, effective, affordable systems of care that our neighbors value.
You are here for this evaluation for 2 reasons:

- To find out if kidney transplant is the treatment option you want?
- To find out if you are a candidate to be transplanted at Christiana Hospital?

This visit does not mean you are automatically placed on the waiting list.
Patient Packet

- CCHS Kidney Transplant Program
- UNOS (United Network for Organ Sharing) Informational Brochures
- UNOS Multiple Listing and Waiting Time Transfer
- UNOS Kidney Allocation Policy
- UNOS Facts & Figures
- Partnering with Your Transplant Team
What will happen today?

- Attend Group Session with Coordinator
- Individual sessions with Transplant Coordinator, Physician and Surgeon
- Meetings with financial counselor, social worker, dietitian, and pharmacist
- Blood work drawn
- Chest x-ray
- Previous records will be reviewed by transplant team
Are you now on the waiting list for kidney transplant because you are here being evaluated?
Nurse Coordinator: Advocate

- Guides you through the testing
- Shares information about testing
- Collaborates with other health care providers regarding your testing
- Main resource for support and answers
- Communicates the team’s decisions
- Point person while you wait for transplant
Social Worker

• Individual Evaluation
• Directs you to resources for health or family issues
• Provides resources for recovery/rehabilitation
• Assists with insurance or medication problems
• Leads Support Group for Patients
• Makes referrals to psychiatry or other counselors as needed
Financial Coordinator

- Reviews Insurance
- Contact point for insurance changes
- Checks type of benefits for transplant and related medications
- Explains Medicare, Medicaid, DE Chronic Renal
- Do not forget to give or call us with any changes!
Dietitian

- Assesses current nutritional status and compliance
- Provides individualized counseling based on patients’ needs:
  - Weight loss/gain to meet BMI standards
  - Increasing protein to improve albumin
  - Pre-Dialysis Diet education
  - Modified diet to improve lab values (potassium/phosphorus, etc.)
  - Carbohydrate controlled diet
- Provides follow up nutrition counseling as needed
- Reviews post transplant diet guidelines
- Assists with diet changes post transplant
Pharmacist

- Records and evaluates your allergies
- Reviews your medications (prescription and non-prescription)
- Explains the differences between current and post-transplant medications and the pharmacist’s role in your care after transplant
- Answers your medication questions
Spiritual or Pastoral Services

• Available during any phase of care –
  – Evaluation
  – While waiting on the list
  – During hospital admissions
  – Post transplant

To contact pastoral services, call 733-1280 or ask one of the transplant staff for assistance.
Your Current Nephrologist

- While waiting on the list, you will still be cared for by your nephrologist.
  - Dialysis
  - Hospital Admissions
- Immediately after transplant, your care will be managed by the transplant team.
- At a certain point, your care will be shared by the transplant team and your nephrologist.
Transplant Cardiologist

- Seen prior to listing to assess candidacy for transplant
- Seen annually while waiting on the list to assess continued candidacy for transplant
- Seen in addition to your own cardiologist
Hepatologist (Liver Doctor)

- Only sees patients with liver disease, such as Hepatitis
- Assesses safety of kidney transplant in the presence of liver disease
YOU

• YOU are the most important member of the team
• YOU must be involved in your care
• YOU should contact your coordinator with changes in phone numbers, addresses, & dialysis centers
• YOU should contact your coordinator with changes in your health
• YOU should ask that test results be faxed to 302-623-3825
Why is there a wait list?

- Approximately 500,000 people in the United States have chronic kidney disease.
- Approximately 111,000 people are on the kidney transplant waiting list... increases every day.
- Approximately 15,000 kidney transplants are done each year
  - 50% are living donors
  - 50% are deceased donors
Treating Chronic Renal Disease?

- Hemodialysis
  - In-Center
  - Nocturnal
  - Home
- Peritoneal Dialysis
  - At night on cycler
  - Continuous
- Kidney Transplant
  -- Wait on the list
  -- Find a living donor
- Depending on age and other health problems, patient survival is better if you are transplanted than if you stay on dialysis.
Evaluation Process

- Meet with the Transplant Team to find out if you meet the criteria for listing and transplant
- Get testing done quickly (within three months)
- Talk with family and friends about living donation
Inclusion Criteria for Listing

• On Hemodialysis
• On Peritoneal Dialysis
• Not on dialysis, but eGFR (kidney function) is at 20% or below
Exclusion Criteria

- Severe heart disease without possibility of intervention
- Other organ failure requiring transplant – can be referred for combined.
- Patients with irreversible essential organ failure
- Current malignancy (cancer)
- HIV infection, AIDS, or active infection
- Multiple medical problems making surgery unsafe
Contraindications for Listing

- Age > 75
- Significant blood vessel disease
- Patients who are unable to care for themselves and have no support person to help them
- BMI > 38
- Patients with no means to financially pay for post transplant medications
Possible Roadblocks for Listing

- Patients with active illegal drug use or other psychosocial contraindications
- Patients with cancers that have been medically or surgically treated
- Patients with recurrent infections
- Tobacco Abuse (Smoking or chewing)
- Untreated Sleep Apnea/CPAP non-compliance
Why do I have to get testing done?

- Kidney transplant is not a life saving procedure. We need to be sure you are safe for surgery.
- The post transplant medications that keep you from rejecting your kidney make it easier for you to develop cancers, infections, and viruses. Therefore, we have to be sure that you are free of these conditions.
Why do I have to get testing done?

- Kidney transplant is a blood vessel surgery, so the surgeons need to assess the health of your blood vessels.
What Tests do I need to be listed?

- Cardiac Testing
  - To decrease risk of adverse events during or after transplant - ensure your safety
  - Done yearly
- Blood work
  - Test for TB
  - Clotting Tests
  - HLA
  - Viral Testing
  - And More
Tests Needed for Listing

- Radiology
  - Chest Xray
    - R/O infection
    - R/O cancer
    - R/O cardiopulmonary problems
  - CT Scan of the Abdomen and/or Ultrasound
    - To assess blood vessels
    - To look at anatomy
    - To R/O cancers
Tests Needed for Listing

• Health Maintenance
  – Scheduled by you with the help of your PCP
  – Complete within 3 months of evaluation
  – Mammogram for women over 40
  – Gyn/PAP exam for women of all ages
  – Colonoscopy for everyone over 50
  – Dental Clearance to R/O infection and cancers
Tests Needed for Listing

- Other testing may be ordered based on:
  - your physical examination today
  - your health history
Complete Testing to Get Listed

- You will not be actively listed until testing is completed, results received, reviewed, and discussed.
- Waiting time is the key factor in getting a transplant.
  - Average waiting time is **5 - 10 years** in our region
  - Blood type plays a major role in how long you wait for a deceased kidney
    - A - 5+ yrs.
    - O - 6+ yrs
    - B - 7+ yrs
Listing

• UNOS—United Network for Organ Sharing
  – federal agency that keeps information on all potential listed recipients throughout the U.S.

• OPO—Organ Procurement Organization
  – Gift of Life—local organ procurement organization—
    • DE, southern NJ, eastern PA
  – notifies all transplant centers in this region when an organ becomes available

• 16 transplant centers within this region
  – 13 adult
  – 3 pediatric
Multi-listing

• You may list in other regions (OPOs)

• Advantages
  – Increases your chances to match with an organ donor
  – Could decrease your wait time for a donor

• Disadvantages
  – You must travel to the kidney for transplantation as well as all of your postoperative care
Listing Status

• Listed status 7 (Inactive)
  – Accumulating time on the deceased donor list but will not be called for a kidney transplant.

  – Reasons why you may be listed status 7:
    • Change in functional status
    • Waiting 1 year post heart stent
    • Change in health or social status TEMPORARILY making you NOT a candidate for transplant
Listing Status

• Listed status 1 (Active)
• Testing is completed
• Ready from a medical, surgical, & psychosocial standpoint to be offered a kidney
• This is your goal!
Types of Donors: A True Gift

• Living Donors

• Deceased Donors
  – KDPI < 85
  – KDPI > 85
  – Donation after cardiac death
  – Directed Donation
  – PHS (Public Health System) High Risk
Living Donation

• Types of Donors
  – Living related
  – Living unrelated

• Criteria for Living Donors
  – Must be between 18 and 65 yrs. old
  – Must be healthy
  – Must be willing and want to give
  – Must have compatible blood types
# Blood Type Compatibility

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<thead>
<tr>
<th>Recipient Blood Type</th>
<th>Donor Blood Type</th>
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<tbody>
<tr>
<td><strong>O</strong></td>
<td><strong>O</strong></td>
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<td><strong>A</strong></td>
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<td><strong>AB</strong></td>
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<td><strong>O</strong> (Maybe A in rare cases)</td>
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Advantages for Living Donation

• You do not have to wait on a list
• Shorter time between kidney removal and transplantation
  – Kidney spends minimal time “on ice” waiting to be transplanted
• Planned surgery
• Better outcomes
• Kidney is coming from a live person who is well
Living Donation Evaluation

• Donor has a different coordinator than you do
• H&P to rule out any health issues that would make donation unsafe for the donor or for you
• Blood and Tissue Typing done to check for compatibility
• Donor Testing Ordered
Living Donation Evaluation

• Donor seen by the Nephrologist, Surgeon, Living Donor Nurse Coordinator, Social Worker, Dietitian, Independent Donor Advocate, and others.

• Surgery is covered by your insurance

• Travel assistance may be available for the donor through the National Living Donor Assistance Fund
Living Donation

- Can be challenging, but very fulfilling
- The timing of the donation is determined by the donor
- The transplant team **CANNOT** share information about the donor with you, such as why they were turned down as a donor or that they have decided not to go forward with donation
Do You Have a Living Donor?

- Anyone who wants to be or could be a living donor should start by getting their health care updated
  - Mammogram for women over 40
  - Gyn Exam for women
  - Colonoscopy for anyone over 50
  - Vaccinations
  - Visit to PCP
Paired Donation

• An alternate way of receiving a kidney from a living donor, when your own donor does not match you.
• Both you and your donor are entered into a paired donation program if you and the donor agree to do so.
• Christiana belongs to the NKR paired donation program (National Kidney Registry).
KDPI: Kidney Donor Profile Index

• Number given to a donor based on the following information:
  – Donor Age - Race/ethnicity
  – Hypertension  - Diabetes
  – Serum Creatinine  - Cause of death-Stroke
  – Height  - Weight
  – Donation after cardiac death
  – Hepatitis C Status (only candidates who already have Hepatitis C can get a kidney from a Hepatitis C Donor)
KDPI Categories

- **< 20**
  - Allocation to those with longest expected post transplant survival

- **>20 but < 35**
  - Allocation to pediatrics, then according to wait time

- **> 35 but < 85**
  - Allocation according to wait time

- **> 85**
  - Allocation to those who will accept kidney offers from an older donor with some health problems
KDPI > 85

- “Not quite ideal” kidneys
- Separate waitlist for recipients who sign a consent to consider offers
- Kidney survival rate is lower than with young, healthy donors but . . . . .
- If you are over 40, your survival rate is better than if you stay on dialysis
Donation after Cardiac Death

- Donor fails to meet the criteria for brain death
- In order to be declared deceased, the donor’s heart must stop beating
- Donor is removed from life support before kidneys are removed
- 40% chance of delayed graft function, but kidneys will recover (You may need dialysis for a short time after your transplant)
Directed Donation

• If someone dies in a hospital under certain conditions, and their family is aware that you are on a kidney transplant list they can ask that you be given the kidney.

• Donor must be blood and tissue type compatible for you

• Kidney can come from anywhere in the United States and not just your region
PHS Increased Risk Donors

• ALL donors are tested for HIV and Hepatitis BEFORE you are called with the offer

• Organs coming from donors that meet the criteria of the Public Health Services as increased risk
  – Sexual Behaviors
  – Drug Use
  – Out of Country Travel
  – Tattoos and body piercings
  – Imprisonment
  – Greater than 10 blood transfusions

• You will be told if kidneys are coming from donor with increased risk

• You have the right to accept or not accept the offer
How are organs offered?

• A list is generated for each kidney offered by UNOS.
• UNOS Notifies the OPO, Gift of Life.
• At CCHS, donor information is first reviewed by the surgeons.
• Patients are notified by the transplant coordinator at the hospital where they are listed.
When a kidney becomes available

- We have **1 hour** to reach you by phone therefore keep your contact information updated and answer the phone!
  - Ensures us that you are available
  - We ask questions about your health
  - We discuss the offer with you. You decide if you want the kidney or not.
When a Kidney becomes available

- You may receive many offers before you are transplanted.
- There are many recipients offered each organ.
  - *Primary* means you are first on the list
  - *Back up* means you are not the first person in line
- You will be at a different place in line for each kidney offer.
- Crossmatch to see if you are compatible with the donor.
No such thing as “Top of the List”

• The order of the list changes with each organ that becomes available
  – Donor’s blood type
  – Crossmatch results
  – Recipient’s time on the list
  – Recipient’s state of health at the time
  – KDPI of the Donor

• UNOS makes the ultimate decision for who gets the organ
Crossmatch

- Crossmatch tests whether the recipient is compatible to the potential donor
  - Negative crossmatch is desired
  - A positive crossmatch means you cannot accept a kidney from this donor
  - Antibodies (fighter cells against a specific protein in the donor) can develop, so repeat crossmatch testing is required during evaluation of living donors and prior to all transplants
Panel Reactive Antibodies (PRA)

- Recipient’s serum is tested against a panel of cells from many people
- Increases due to blood transfusions, prior transplants, abortions or pregnancy
- A higher PRA makes finding a donor more difficult and impacts kidney survival
Monthly Blood Samples

• Once listed, a tube of your blood will be sent each month to the tissue typing lab to:
  - Check for the presence of new antibodies (PRA)
  - Be used for testing against any potential donors when available

• Jefferson Hospital is the tissue typing lab
Kidney Transplant Operation
Group Question

Will your own kidneys be removed when you receive your transplanted kidney?
Potential Surgical Issues

- Bleeding
- Infection
- Fluid collections in wound
- Non-functioning kidney
- Clotting issues
- Urinary leak or blockage
  - Most complications can be corrected and happen infrequently.
What happens after the transplant?

- Hospital stay
  - 3-5 days with living donor kidney
  - 5-7 days with deceased donor kidney
- Anti-rejection Medications are started
  - 2-3 medications for the life of the kidney
  - Keeps your body from recognizing the new kidney as something foreign
  - In the beginning medications will be adjusted often, and then as needed
  - Missed doses will increase the chance of rejection
- Follow-up exams and lab work
Post-Transplant Follow-up

• Transplant Clinic follow-up
  – Short-term and Long-term office visits
• Thanking the Donor family
• Continued care from transplant team for the life of the kidney
• It is extremely important to stay in contact with your Transplant Team – even if you move.
Meds After Transplant

• Can be up to 10 different medications and 20-30 pills a day!
  – Prograf® (tacrolimus)
  – CellCept® (mycophenolate mofetil)
  – Nulojix® (belatacept) - monthly IV infusion
• Some are preventative to avoid infections
  – Bacterial, viral, fungal
• Continue medications for blood pressure, cholesterol, diabetes, etc.
• Anemia: may still need EPO shots
Side effects of medications

• Nausea, vomiting, diarrhea!
• Low blood counts
• New diabetes 15-20% (All patients will begin diabetic education while in the hospital. This includes insulin administration)
• Infections
• Toxic levels from too much medication
• Rejection (15%) from too little
• Hair loss
• Increased blood pressure
• Cancers can grow more quickly
Common medical problems

• Reasons kidneys stop working
  – Patient Death from heart attacks and stroke while kidney is still functioning.
  – Infections and cancer
  – Missing medications will lead to rejection

• The main reasons for admission to a hospital are dehydration and infections
  – These admissions increase with age
Common medical problems

• **Cancer**
  – Skin: 50% @ 5yrs, 80% @10yrs
  – Kidney: your old ones
  – Post transplant lymphoproliferative disorder 1% risk caused by the EBV/Mono virus

• **Delayed Graft Function/Sleepy kidney**
  – You may need some dialysis for a short time

• **Rejection does not always mean you lose your kidney**
  – Biopsy @3m and @ 1year
  – Can be silent! Frequent lab test are needed
Kidney Transplant Doctors

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The Christiana Care Way

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