



Kidney Transplant Family Education Class

Updated: 12-18-2019

OHSU Kidney Transplant Program

- First successful kidney transplant 1954
- First kidney transplant at OHSU 1959
- 60 years and counting!
- More than 5000 kidney transplants
- About 100 per year
- About 300 patients on our waiting list



Benefits of kidney transplant

- Quality of life
- Quantity of life
- More like your own kidney than dialysis
- Not as time consuming
- More freedom to travel
- Fewer dietary and fluid restrictions
- Return to work or school
- Growth in children
- Fertility

Risks of kidney transplant

- Medications: life-long, many side effects, expensive
- Infections
- Rejection
- Cancer
- Coronary artery disease
- Diabetes
- Surgical complications
- Financial concerns
- Loss of dialysis support system

Kidney transplant is not a cure

Kidney transplant is a treatment option

Other treatment options

- Hemodialysis
- Peritoneal dialysis
- No treatment

**You have the right to refuse transplant
at any time.**

General recipient evaluation

- History and Physical
- Laboratory
- Cardiac testing
- Chest X-ray
- Abdominal Ultrasound
- Dietary Evaluation
- Social Work Evaluation
- Pharmacy Evaluation
- Patient/Family Education
- Financial Evaluation
- Immunizations
- Dental Evaluation
- Pap/Pelvic/Mammogram
- Colonoscopy

Additional testing may be required

Blood type matching

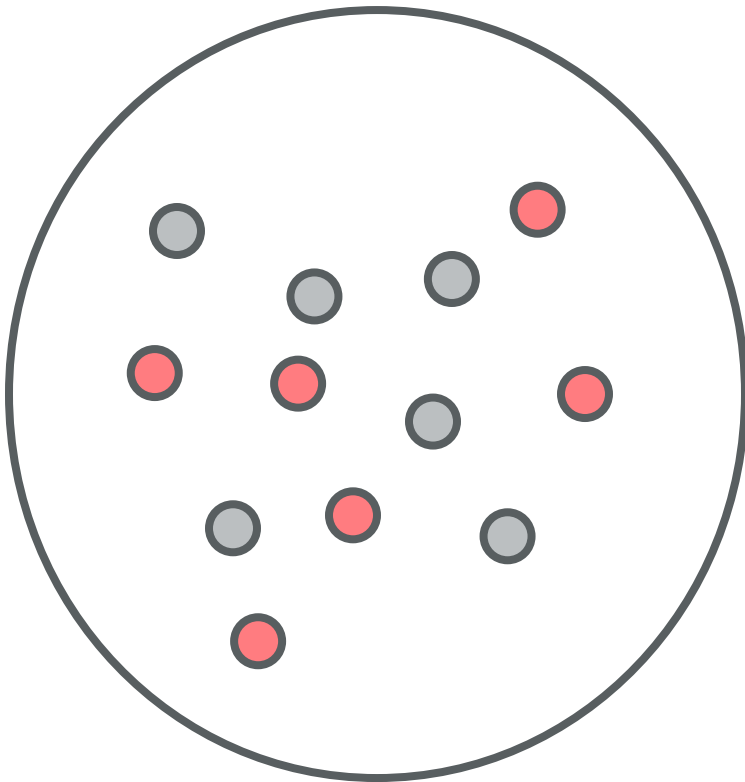
Recipient	Living Donors	Waiting List
O (46%)	O,*	O
A (40%)	A, O	A
B (10%)	B, O,*	B,*
AB(4%)	AB, O, A, B	AB, A

* Or possibly non-A1 donors

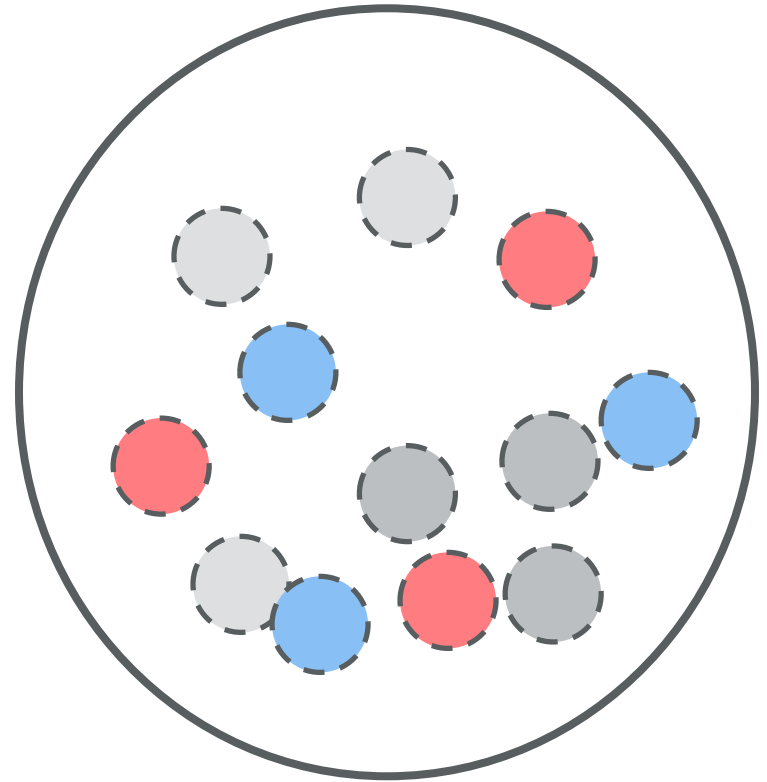
Crossmatch

Transplant in a test tube

Negative (Compatible)



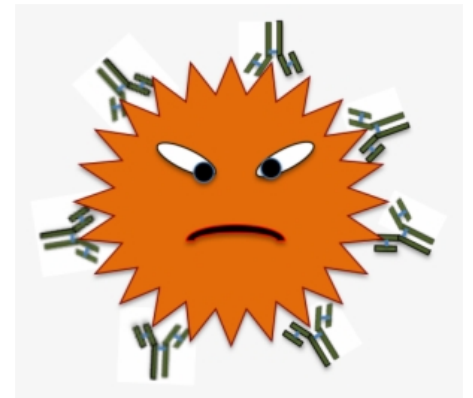
Positive (Incompatible)



Why would a donor be incompatible

Antibodies: your body's reaction to others' genetic markers

- Previous transplant
- Pregnancies
- Blood transfusions
 - Use white blood cell filter
 - No transfusions from potential donors
 - Call your coordinator
 - *Work with your kidney doctor to keep your hemoglobin level healthy*



PRA: a measure of this reaction (0-100%)

Cytomegalovirus (CMV)

- A common virus in the human population
- The virus can be spread with the kidney
- May cause diarrhea, ulcers, infection, or rejection after transplant
- Medicine available to prevent/treat the virus
- We try to match donor and recipient CMV status



Post-evaluation

Selection Conference

- Transplant team (physicians, coordinator, social worker, and dietitian)
- Review results
- Determine your risks
- Determine if you are a transplant candidate
 - ☐ Declined
 - ☐ Deferred
 - ☐ Accepted



Declined or deferred for transplant

- Infection
- Cancer
- High chance of dying with surgery
- Body structure (anatomy) problems
- BMI > 40
- Inadequate post-transplant plan
- Active abuse of drugs or alcohol
- Untreated or inadequately treated mental illness
- Medical noncompliance

Accepted for transplant

- Coordinator will call you with
 - Risks
 - Results
 - Recommendations to be completed
- It is your responsibility to keep us informed of your progress



Planning ahead & support

- Support
 - Lifting restrictions
 - Driving restrictions & transportation
 - Partner in care
 - 24/7 commitment for 1st month (3 months for SPK)
 - Inpatient teaching
 - Outpatient appointments
- Time off work
- Housing/distance from OHSU (1 hour)
- Medical equipment
- Finances



Medicare and kidney transplant

If the transplant is not done in a Medicare-approved transplant center, it could affect your ability to have your immunosuppressive (anti-rejection) medications paid for under Medicare Part B.

OHSU is a Medicare-approved transplant center.

When do I go on the list?

- Complete recommendations
- Current blood sample
- Insurance authorization
- UNOS registration



Data at the time of listing and after transplant is reported to UNOS for regulatory purposes

Waiting time

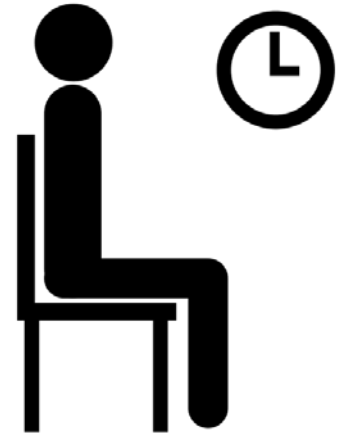
Average wait time can be
5.5 years depending on blood
type and antibody level

Organ distribution

- Points system managed by UNOS
 - Length of time you have been waiting
 - Length of time you have been on dialysis
 - Antibody levels (cPRA%)
 - Prior organ donation
 - Age (ages 0-17)
 - Degree of match with donor

What to expect on the waiting list

- You WAIT and it can be a difficult time
- Active status
 - You are on the waiting list and available for donor offers
 - PRA blood draw every 28 days; you must track this
- Inactive status
 - You are still on the waiting list
 - No PRA needed
 - Continue to gain waiting time
- Update testing every 1-2 years

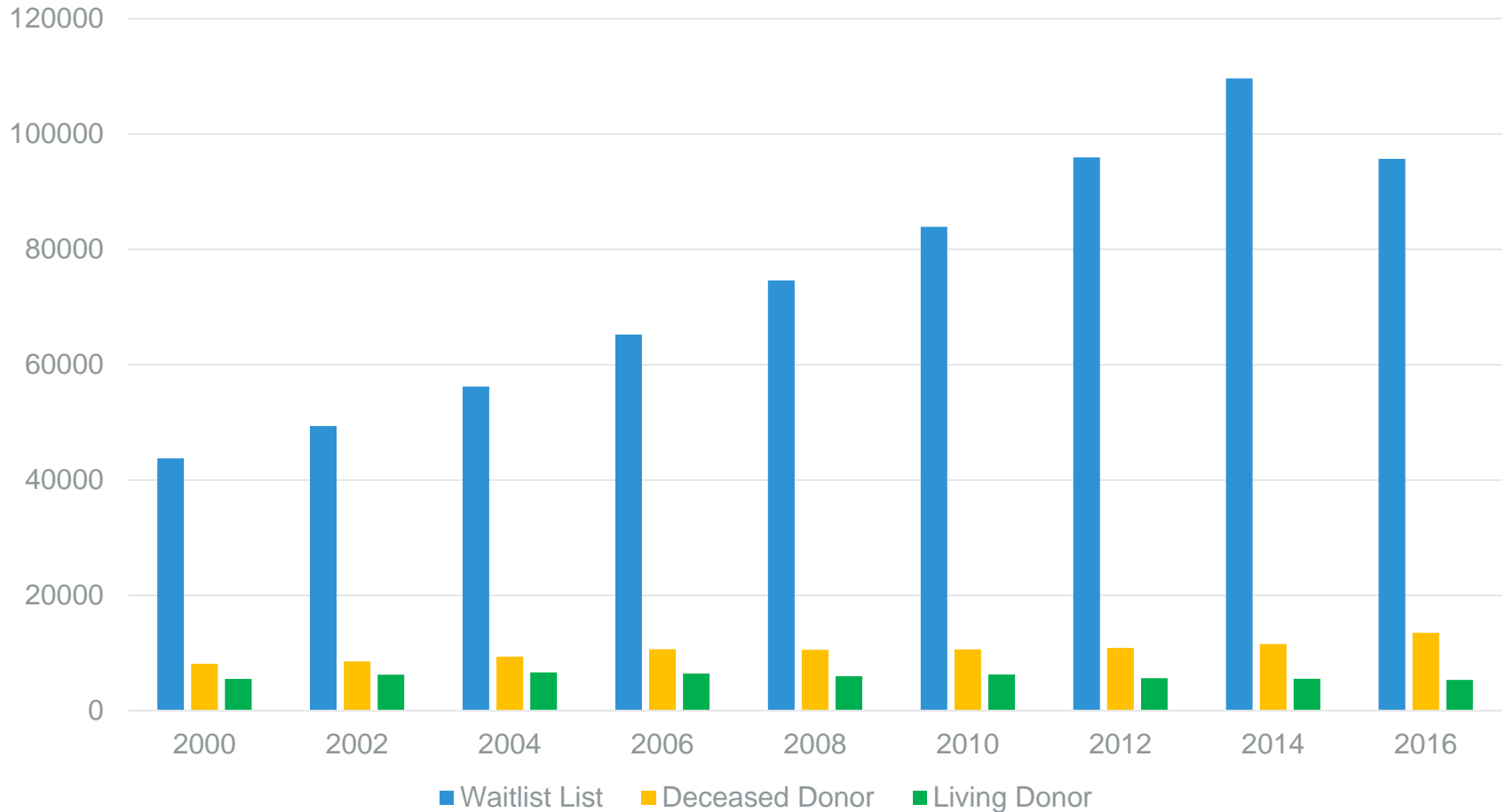


What to expect on the waiting list

- **Inform Coordinator for any of the following:**
 - Insurance changes
 - Phone number & address changes
 - Changes in your health
 - Dialysis changes
 - Antibiotics
 - Hospital admissions
 - Travel



The U.S. Kidney Donor Gap



United Network for Organ Sharing (UNOS)

- Longevity matching
- Paired exchange
- Multiple listing
- Transfer of waiting time
- Special donor types

Donor risk factors may affect the success of the transplant or recipient health

Definitions:

Estimated post transplant survival (EPTS)

- Results range from 0-100%
- Calculation based on your
 - Age
 - Time on dialysis
 - Prior organ transplant
 - Diabetes status
- Calculated for everyone \geq age 18
- **Lower score is better**

Definitions:

Kidney donor profile index (KDPI)

- Results range from 0-100%
- Calculation based on donor:
 - Age
 - Ethnicity
 - Creatinine
 - Medical history
 - Cause of death
 - Donation type
- **Lower score is better**
- Scores > 85% require written consent

Deceased donors

- No known spreadable cancer
- No known infectious diseases
- Good kidney function



Thoroughly screened, but not risk free.

KDPI > 85% donor

- Optional UNOS donor category
 - If interested, a consent for consideration must be submitted
 - Those consented will be eligible for both standard and KDPI >85% donors
- These kidneys are biopsied
- They may function for a shorter time period
- Wait times for these kidneys are expected to be shorter

Public Health Service (PHS) increased risk donor

- Optional UNOS donor category (20% of donors)
 - If interested, a consent for consideration must be submitted
 - Those consented will be eligible for both standard and PHS donors
- Some patients may have up to 10% better survival at 5 years
 - Shorter wait time
 - Average age of PHS donor = 31
- Disease transmission risk is extremely low (HIV, Hepatitis)
 - 0.05% chance of transmission
 - Newer testing methods have reduced risk further

Living donor testing

- Recipient coordinator will let you know when your donors can begin testing.
- Your donor will have a separate coordinator
 - We cannot share information about your donor with you.
- Takes 2-4 months to complete donor work-up
- Can be started locally but completed at OHSU
- Paid for by donor program
- OHSU participates in national exchange programs

Living donor criteria

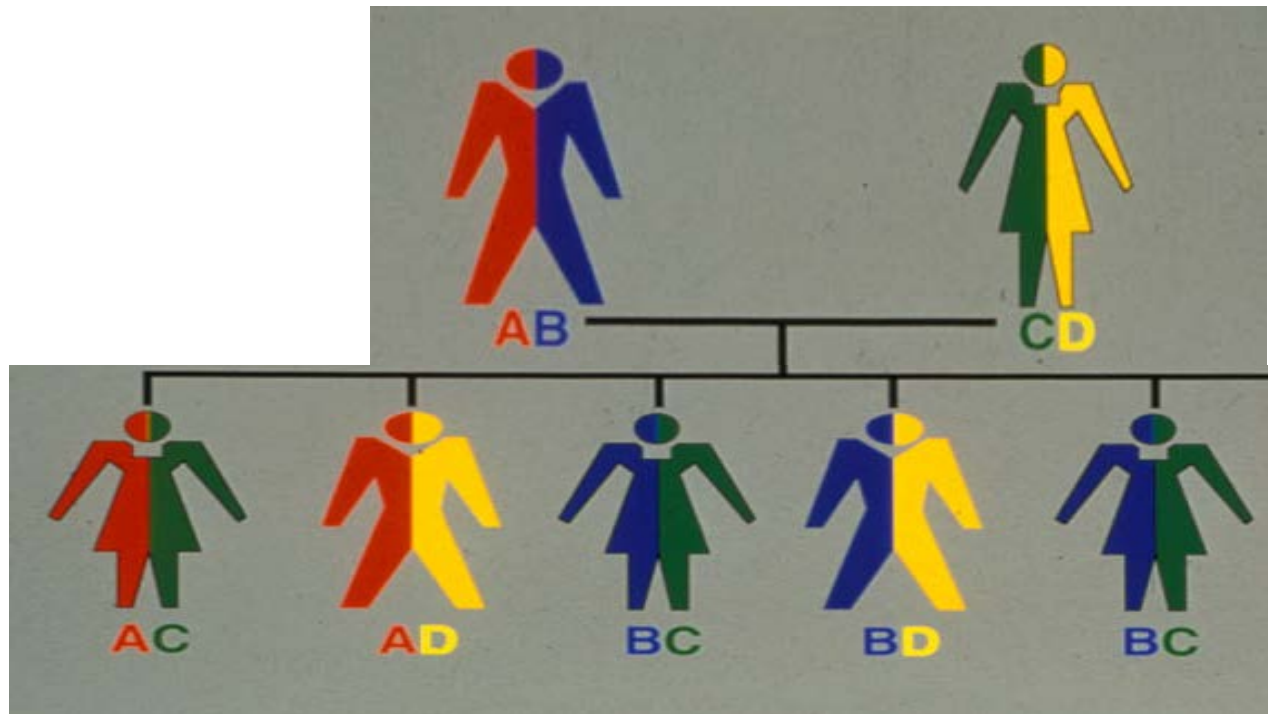
Excellent Health

- Ages 21-70
- No diabetes
- No high blood pressure
- BMI less than 32
- No transmittable diseases
- Low surgical risk
- ***We will not compromise donor safety***



**Living donation is a
voluntary act**

Finding a donor



Living & deceased donors

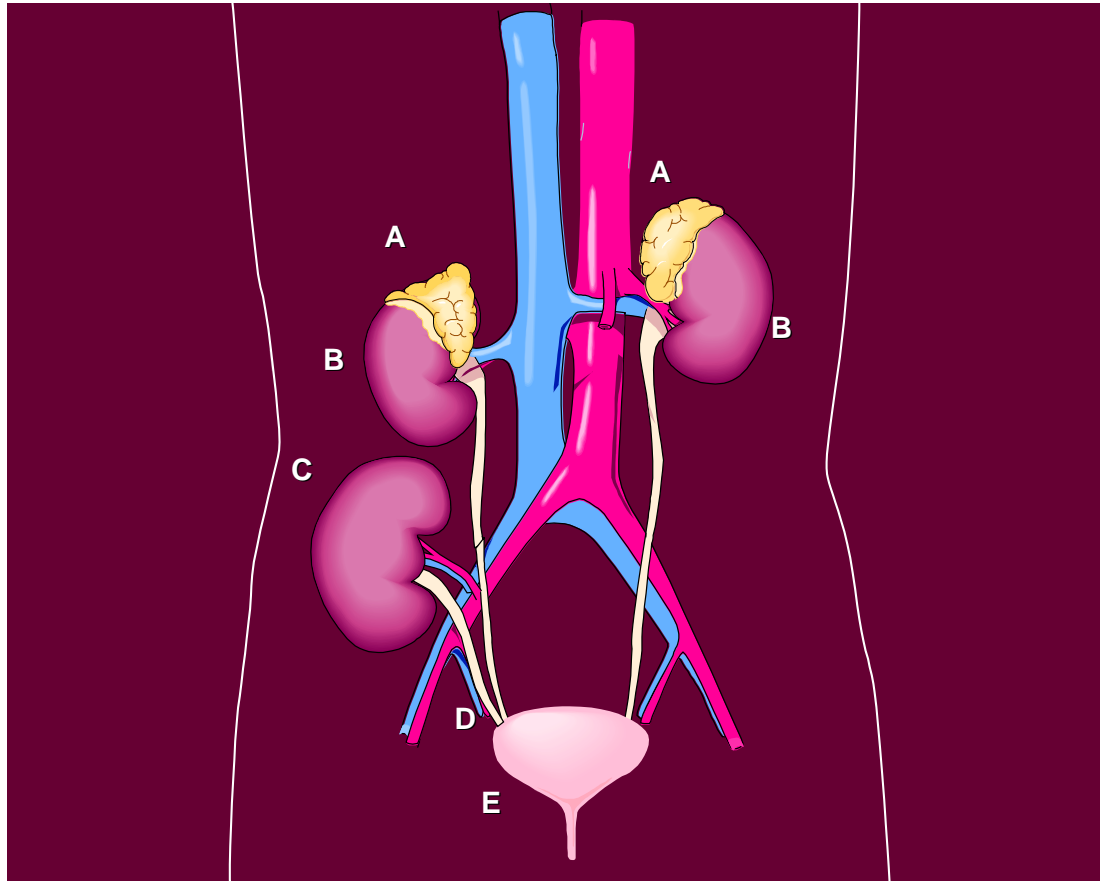
	Living	Deceased
Average kidney survival	15 years	10 years
Kidney function	Usually immediate	Can be delayed
Surgery date	Scheduled	Unknown
Wait time	Typically shorter	Typically longer
Medications	Doses may be lower	Standard dosing

When you get the call

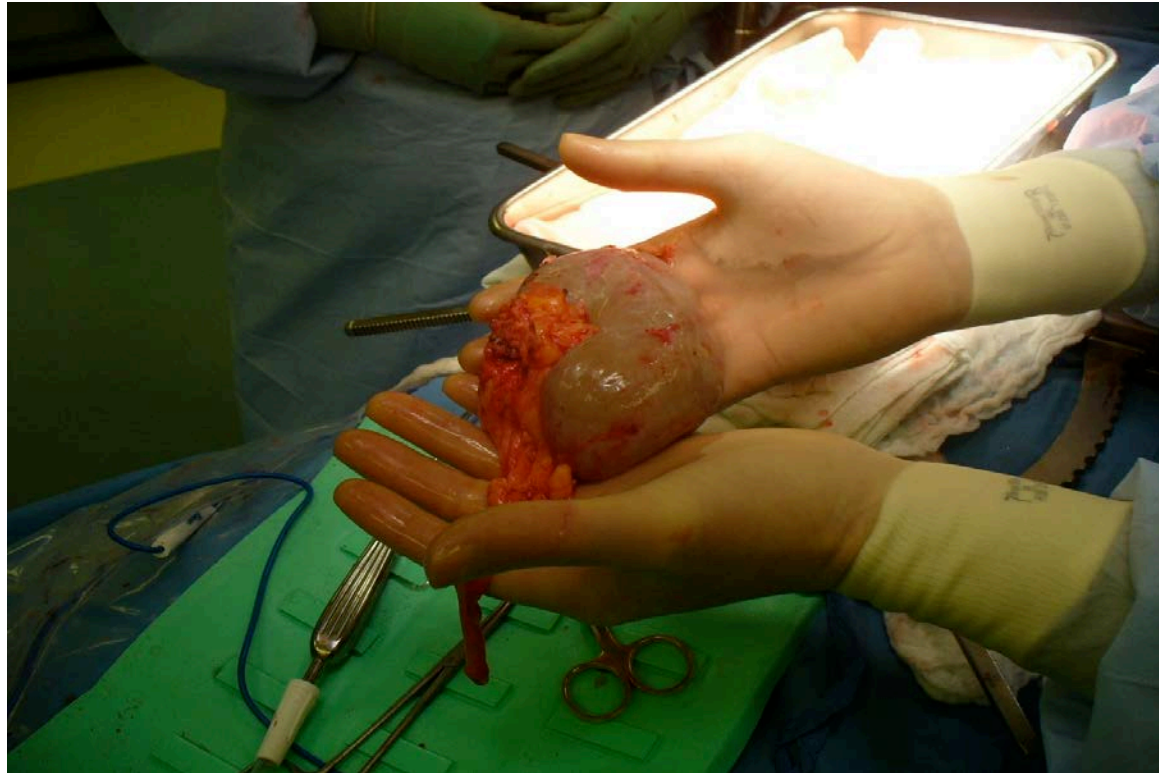
- We have 20 minutes to reach you by phone
- Be prepared to get on the road within 1 hour
- We will:
 - Screen you for health concerns
 - Explain the donor type & timeline
 - Review your post transplant care plan
- We will not:
 - Discuss any personal donor information
- There is always the possibility that an offer will not result in transplant



The surgery



The surgery



Recipient

- About 4 hours in operating room
- Incision about 6 inches
- Usual post-op activity
- Bladder catheter, wound drains, central line, arm IV
- Dialysis, if needed
- Plan for a 3-4 day stay
- Education, education, education

Potential surgical risks

All surgeries have risks

- Anesthesia reaction
- Urine leak
- Urine blockage
- Fluid collection
- Bleeding
- Blood clot formation
- Infection, including wound infection and pneumonia
- Organ failure (may require re-transplant)

Less than 5% reoperation rate in the first month

Other potential risks

- **Psychosocial Risks**
- Depression
- Post-Traumatic Stress Disorder (PTSD)
- Generalized anxiety, issues of dependence, & feelings of guilt
- **Rare Risks**
- Heart issues
 - Abnormal rhythms
 - Sudden drop in blood pressure that impacts your circulation
- Multiple organ failure
- Death

Potential outcomes

😊= Kidney works immediately
70-80%

😐= Slow or delayed kidney function
You may need dialysis after transplant
20-30%

😞= Fail immediately
less than 1%

Transplant outcomes

See handout in class packet

Handout includes current data for kidney and pancreas on:

Patient survival: OHSU 1 year actual patient survival;
OHSU 1 year expected patient survival;
National 1 year patient survival.

Graft survival: OHSU 1 year actual graft survival;
OHSU 1 year expected graft survival;
National 1 year graft survival.

Why do transplants stop working?

- Noncompliance with medical treatment
- Need to decrease or stop antirejection medications because of other health issues
- Chronic rejection/changes over time
- Return of original disease
- Rarely, surgical complications

Rejection

- Can be seen at any time
 - Often no symptoms
 - Self monitoring essential (labs, weight, blood pressure, temperature)
- Treatment available
 - May require admission to hospital, biopsy, and IV meds
 - May change immunosuppression medications
- May lead to loss of transplanted kidney

Transplant medications



Transplant medications

- Prevent your immune system from attacking the transplanted kidney
- Increase your risk of:
 - Cancer
 - Infection
 - Heart disease
 - Diabetes

Transplant Medications

Prevent Rejection

Prograf (tacrolimus)
Cellcept (mycophenolate)
Prednisone

Complex schedule
Many interactions
Frequent dose changes
based on timed lab draws
Birth control required

Minimize Most Common Side Effects

High blood pressure
High blood sugars
Stomach upset
Tremors
Mood swings
Delayed wound healing
Headaches
Anemia



Drugs

Medication guarantees



- You may need to take these medications for the rest of your life
- Doses are higher the first three months
 - You will have some medication side effects
 - Some side effects decrease as doses decrease
- Medications need to be taken as directed
- Adjusting your own medications can lead to loss of the kidney

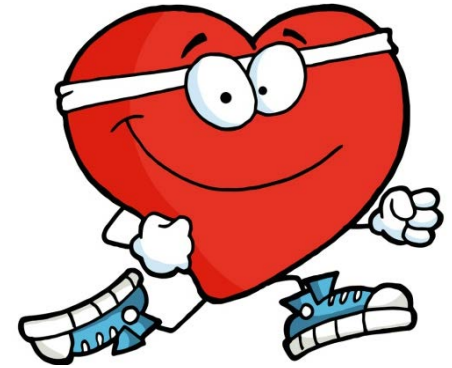
Post-transplant commitments

- Daily self monitoring
 - BP
 - Weight
 - Temperature
 - Blood sugar
- Medications
 - Take exactly as prescribed
- Clinic visits
 - For life
- Lab draws
 - For life
 - At OHSU for 1st month
- Biopsies
 - At 3 & 12 months
 - As needed
- Communication
 - Share your concerns
 - Be part of our team



Lifestyle after transplant

- Heart healthy
 - Diet, healthy weight
 - Exercise
 - Blood pressure & cholesterol control
 - No smoking
- Health maintenance exams
- Infection prevention
- Immunizations
- Pets



Quiz

- Attending this class means you are on the kidney transplant waiting list.
 - True/False
- When can my donors start the process?
- Kidney transplant cures end-stage renal disease (ESRD).
 - True/False
- Once I am on the waiting list, I won't need to do anymore testing.
 - True/False
- After transplant, how long will you need to take transplant medications?

Thank you!

Before you leave, turn in your:

- Health Questionnaire
- Informed Consent
- LIT Consent



Want to know more:

- Look over the UNOS booklet “What Every Patient Needs to Know”.