



## 评估的过程

### 肾脏/胰脏移植

评估的过程是很复杂、也因人而异。这过程是从您医生将您转介到华大医学中心 UWMC 开始。

### 谁能合格接受移植？

要合格做移植的手术、您必须为下列的两者之一：

- GFR（肾小球滤过率）每分钟低于 20 毫升，或
- 已在做肾透析

如果您的肾小球滤过率（GFR）每分钟低于 30 毫升、我们就可以开始为您作移植评估、但是您等待移植的时间要在您的肾小球滤过率（GFR）每分钟低于 20 毫升以后才开始计算。您的肾病专家（肾脏医生）会帮助您决定何时开始移植评估。

被考虑做肾脏移植、您必须符合下列的情况：

- 您的医生告诉您、您预期至少可以活 5 年。
- 您的身体足够健康、可以做手术。就是您的心脏很强壮、腿部的血管没有任何阻塞，您没有活跃的癌症
- 您不抽烟。
- 体重没有过重。
- 您的财务状况及照顾者、都可以支持您度过移植的过程。

如您患有 1 型（青少年）糖尿病、您可能合格接受肾脏/胰脏移植手术。大多数患有 2 型糖尿病的人仍然有胰腺功能。

如您居住在美国境外、且符合所有标准、您仍有资格在 UWMC 接受移植手术。



确保您和您的照顾者向您的医生询问有关移植过程的问题。

## 有关评估的过程？

在您被接受作移植前、您的评估组将：

- 审核您的病历。
- 咨询您的病史、为您做体检。
- 与您及您的支持人讨论：
  - 移植的过程。
  - 移植的风险。
  - 移植手术的相关事项。
  - 使用 *免疫抑制药*（为防止您自身排斥新器官而必需服用的药物）。
  - 您的饮食习惯、营养所需及食物与药物的相互作用。
- 简介：
  - 解说移植后的住院
  - 常规的诊所复诊及后续的跟进
  - 您的财务计划
- 评估您手术后的支持。您需要：
  - 至少几周内需要照顾者每天 **24** 小时为您提供帮助。您可以和他们住在一起，或他们与您住在一起。
  - 在最初的数周内、每周有几天需要有人带您上午 **7:30** 到诊所来。
  - 帮助您学习新的药物。
  - 帮助您提拿超过 **10** 磅以上的重物（一加仑水约 **9** 磅）。

如您的看护人需要拿休假、我们的社工可以帮助他们取得“*家庭医疗休假法*”（FMLA）的表格。

为加速评估的阶段、您可以由您自己的医生来做测试及门诊。如您希望在华大医疗中心 UWMC 做检查及测试、我们的移植服务人员就可为您安排您的预约。

我们了解、对于您及您所爱的人来说、接受评估可能会让您感到难以承受、疲惫和压力。关于这个过程的一个难点是知道您可能不能成为移植的候选人。与您信任的人分享您的想法和感受、可能对您会有帮助。

请知道、我们会仔细地审核在评估期间收集的所有信息、以便为您获得最佳结果。在您此过程中、如您有任何问题、请随时与移植团队工作人员咨询。

## 化验、测试、及程式

在评估中、您会做很多测试包括查您的肺、心脏、循环、胃、及肠道。下面表格打勾的标记(✓)是代表在移植之前需要做的测试。

根据您的病史、您可能还需要做其他的检查。您也可能被转介到其他专科、如传染病或心脏病、以便批准手术。

健康的各个部位	化验	肾脏移植	胰脏移植
膀胱	排泄性膀胱尿道造影 (如有膀胱问题)	某些人	某些人
血液细胞计数	白血球 <b>WBC</b> 、红血球 <b>RBC</b> 、血小板 <b>platelets</b>	✓	✓
血液化学	电解质/矿物质	✓	✓
血脂	胆固醇, 高密度脂蛋白, 低密度脂蛋白, 甘油三酯	✓	✓
骨	骨密度扫描	某些人	某些人
癌症筛查	男性: 前列腺特异性抗原 PSA (取决于年龄)	✓	✓
	妇女: 巴氏涂片	✓	✓
	乳房 X 光片 (如超过 40 岁)	✓	✓
血凝	<b>PT/PTT</b> 凝血酶原时间 (PT) 和部分凝血活酶时间 (PTT)	✓	✓
	血凝测试 (如有血栓的病史)	某些人	某些人
眼	检查眼底 (Fundus exam)、眼镜度数 (refractory index), 裂隙灯显微镜检查 (slit-lamp)	某些人	✓
肠胃	内窥镜食道、胃、十二指肠镜检查 <b>EGD</b> (如有胃病史)	某些人	某些人
	肠镜检查 (如有家族肠癌史或超过 50 岁)	✓	✓
心脏	心电图	✓	✓
	心脏负荷测试	某些人	✓
	心血管冠状动脉造影	某些人	某些人
	超声心动图	某些人	✓

健康的各个部位	化验	肾脏移植	胰脏移植
组织相容性	血型 (ABO、Rh 因子 (Rh)、人类白细胞抗原 (HLA) 群体反应性抗体、 (PRA)	✓	✓
肾脏	血尿素氮 (BUN) 肌酐 (creatinine)	✓	✓
肝脏	白蛋白 (Albumin)、总胆红素 (bilirubin)、碱性磷酸酶 (Alkaline phosphate) 谷氨酰转移酶、 (GGT), 血清谷草转氨酶 (SGOT), 血清谷丙转氨酶 (SGPT)	✓	✓
肝脏/胆囊	腹部超声检查	✓	✓
	腹部/盆腔 CT 扫描	某些人	某些人
肺	Chest -ray 胸部 X 光透视	✓	✓
	肺功能测试 (如有呼吸困难)	某些人	某些人
	低剂量的 CT 扫描 (如 55 岁以上及有抽烟 30 包年*)	某些人	某些人
胰脏	Amylase, Hgb A1c, insulin antibodies, C-peptide 淀粉酶 (Amylase)、糖化血红蛋白测试 (Hgb)、胰岛素抗体 (insulin antibodies)、C 肽 (C-peptide)	某些人	✓
副甲状腺	副甲状腺素	✓	✓
牙齿	牙医检查	✓	✓
甲状腺	甲状腺素	✓	✓
肺结核感染	全血测试	✓	✓
疫苗	甲肝	✓	✓
	乙肝	✓	✓
	肺炎 (2 次)	✓	✓
	流感	✓	✓
	破伤风/白喉/百日咳	✓	✓
	水痘 (50 岁以上)	✓	✓
血管	颈动脉超声检查	某些人	某些人
	腹部及腿部血管超声检查	某些人	某些人

健康的各个部位	化验	肾脏移植	胰脏移植
病毒感染	巨细胞病毒 (CMV)、水痘带状疱疹病毒 (VZV)、单核细胞增多症病毒 (EBV)、单纯疱疹病毒 (HSV) 爱滋病毒, (HIV)、梅毒 (RPR)、甲肝病毒 (HAV)、乙肝病毒 (HBV)、丙肝 (HCV)	✓	✓
其他	活检、如有必要	✓	✓

\* 包年数的计算方法是将每天抽烟的包数量乘以年数。如每天抽 2 包 15 年可以达到 30 包年、或每天半包抽 60 年。

## 评估结果

您的评估团队可以建议您进行移植手术或停止再做下一步。在评估期间可以随时做出此决定。我们无法在开始评估时告诉您它将如何发展或最终结果如何。

评估小组的成员将开会讨论测试结果并决定后续步骤。它可能是：

- 测试可能显示您有健康问题需要在移植前治疗。
- 团队可能会认为对您来说移植不是一种安全的治疗方法。
- **Transplant.** 有的测试或检查结果异常、您可能需要看专科医生听他们的意见。该医生可能是心脏病专家、传染病专家、肺科专家或精神科医生。这些医生会提供关于您做肾脏/胰腺移植的意见。

做完全部的医疗检查后、我们会寄给您一封信。这封信会通知您、如您被批准参入国家器官移植等候名单。

### 如华大医疗中心 UWMC 的移植科不接受您做移植

- 如华大医疗中心 UWMC 的移植科不接受您、您可以要求您的肾科专家转诊到另一个移植中心。

### 如华大医疗中心 UWMC 的移植科接受您做移植

一旦华大医疗中心 UWMC 的移植科接受您做移植：

- 如您抽烟、您必须戒烟才能做下一步。这是因为抽烟会：
  - 降低您在移植手术中存活的能力
  - 增加感染、心脏病及癌症的风险

如您需要转介到戒烟计划、可询问移植社工。

- **您需要对移植作最终决定。**
  - 关于移植的最终决定权属您。 移植仅是肾病或糖尿病的治疗方法。并非治愈方法。
  - 如您认为自己无法在移植前后做必要的事情以获得最佳效果、请仔细考虑移植是否适合于您。 移植团队将尊重您做出的任何决定。

## 在多个中心排名

联合器官共享网络（UNOS）政策是您可以在多个移植中心排名。在多个中心排名可能会缩短您的等待时间。但是、在同一器官或去组织（OPO）区域的多个移植中心排名是没有优势的。

如您愿意、您还可以将等待时间从一个移植中心转移到另一个移植中心。

### 您有疑问吗？

我们很重视您的疑问。当有疑问或顾虑时，请致电您的医生或医护人员。

移植科电话：  
206.598.3882

## **The Evaluation Process**

### *For a kidney/pancreas transplant*

*The evaluation process is complex, and differs for each patient. It begins with a referral your doctor makes to UWMC.*

### **Who is eligible for a transplant?**

To be eligible for transplant surgery, you must either:

- Have a GFR (*glomerular filtration rate*) below 20 mL/minute, or
- Be on dialysis

We can assess you for transplant if your GFR is below 30 mL/minute, but your wait time for transplant will not start until your GFR is below 20 mL/minute. Your *nephrologist* (kidney doctor) will help you decide when to start the transplant evaluation.

To be considered for kidney transplant, these statements must be true:

- Your doctors have told you that you can expect to live at least 5 years.
- Your body is healthy enough for surgery. This means that your heart is strong, you do not have any blockages in the blood vessels in your legs, and you do not have active cancer.
- You do not smoke.
- You are not too overweight.
- Your financial resources and caregivers will support you throughout the transplant journey.

You may be eligible for kidney/pancreas transplant if you have type 1 (*juvenile*) diabetes. Most people with type 2 diabetes still have a working pancreas.

If you live outside the U.S., you are still eligible to receive a transplant at UWMC, if you meet all the criteria.



*Be sure that you and your caregiver ask your doctors your questions about the transplant process.*

## What happens during evaluation?

Before you are accepted for transplant, your evaluation team will:

- Review your medical records.
- Ask for your medical history and do a physical exam.
- Talk with you and your support person about:
  - The transplant process
  - Risks related to transplant
  - What is involved in the surgery
  - The use of *immunosuppressant* drugs (drugs you will take that keep your body from rejecting the new organ)
  - Your eating habits, dietary needs, and food and drug interactions
- Briefly review:
  - What to expect during your hospital stay
  - The routine for clinic visits and follow-up after a transplant
  - Your financial plans
- Assess your support system after surgery. You will need:
  - Caregiver(s) to help you 24 hours a day for at least a few weeks. You may stay with them, or they may stay with you.
  - Help with rides to the clinic at 7:30 a.m. several days a week.
  - Help with learning your new medicines.
  - Help with lifting anything more than 10 pounds (a gallon of water weighs almost 9 pounds).

Our social worker can help your caregiver(s) with their *Family Medical Leave Act* (FMLA) forms if they need to take time off work.

You can help move your evaluation along by seeing your own doctor for your tests and visits. If you want to have your workup and testing done at UWMC, our Transplant Services will set up your appointments.

We understand that being evaluated can be overwhelming, tiring, and stressful, for both you and your loved ones. One of the hard parts about this process is knowing that you may not be a candidate for transplant. It may help you to share your thoughts and feelings with someone you trust.

Please know that we carefully review all of the information we gather during your evaluation to try to achieve the best outcome for you. Feel free to ask the transplant team staff any questions you have as you go through this process.



## Labs, Tests, and Procedures

During your evaluation, you will have many tests to look at your lungs, heart, circulation, stomach, and intestines. A check mark (✓) in the table below means that these tests are required before transplant.

There may be other tests you will need to take, depending on your medical history. You may be also referred to other specialists, such as Infectious Disease or Cardiology, to be cleared for surgery.

Health Area	Lab Test	Kidney Transplant	Pancreas Transplant
<b>Bladder</b>	Voiding cystourethrogram (if history of bladder problems)	some	some
<b>Blood cell counts</b>	WBC, RBC, platelets	✓	✓
<b>Blood chemistry</b>	Electrolytes/minerals	✓	✓
<b>Blood fats</b>	Cholesterol, HDL, LDL, triglycerides	✓	✓
<b>Bones</b>	DEXA scan	some	some
<b>Cancer screening</b>	Men: PSA (depends on age)	✓	✓
	Women: Pap smear	✓	✓
	Women: Mammogram (if over 40 years old)	✓	✓
<b>Clotting</b>	PT/PTT	✓	✓
	Coagulation labs (if history of blood clots)	some	some
<b>Eyes</b>	Fundus exam, refractory index, slit-lamp	some	✓
<b>Gastro-intestinal</b>	EGD (if history of stomach problems)	some	some
	Colonoscopy (if family history of colon cancer or over age 50)	✓	✓
<b>Heart</b>	EKG	✓	✓
	Cardiac stress test	some	✓
	Coronary angiogram	some	some
	Echocardiogram	some	✓
<b>Histo-compatibility</b>	ABO, Rh, HLA, PRA	✓	✓

<b>Health Area</b>	<b>Lab Test</b>	<b>Kidney Transplant</b>	<b>Pancreas Transplant</b>
<b>Kidney</b>	BUN, creatinine	✓	✓
<b>Liver</b>	Albumin, bilirubin, alkaline phosphate, GGT, SGOT, SGPT	✓	✓
<b>Liver/ gallbladder</b>	Abdominal ultrasound	✓	✓
	CT abdomen/pelvis	some	some
<b>Lungs</b>	Chest X-ray	✓	✓
	Pulmonary function test (if history of breathing issues)	some	some
	Low-dose chest CT (if over age 55 and history of smoking 30 <i>pack years</i> *)	some	some
<b>Pancreas</b>	Amylase, Hgb A1c, insulin antibodies, C-peptide	some	✓
<b>Parathyroid</b>	PTH	✓	✓
<b>Teeth</b>	Dental exam	✓	✓
<b>Thyroid</b>	TSH	✓	✓
<b>Tuberculosis exposure</b>	Quantiferon blood test	✓	✓
<b>Vaccinations</b>	Hepatitis A	✓	✓
	Hepatitis B	✓	✓
	Pneumonia (2 vaccines)	✓	✓
	Influenza	✓	✓
	Tetanus/diphtheria/pertussis	✓	✓
	Shingles (if over age 50)	✓	✓
<b>Vascular</b>	Carotid arterial duplex	some	some
	Iliac and LE arterial duplex	some	some
<b>Viral exposure</b>	CMV, VZV, EBV, HSV, HIV, RPR, HAV, HBV, HCV	✓	✓
<b>Other</b>	Biopsy, if needed	✓	✓

\* *Pack years* are calculated by multiplying the number of cigarette packs smoked each day by the number of years. A person can reach 30 pack years by smoking 2 packs a day for 15 years, or half a pack a day for 60 years.

## Evaluation Outcome

Your evaluation team can advise either going forward with a transplant or stopping the process. This decision can come at any time during your evaluation. We cannot tell at the start of your evaluation how it will go or what the final outcome will be.

Members of your evaluation team will meet to talk about the results of your tests and to decide next steps. It is possible that:

- Your tests may show health concerns that need to be treated before transplant.
- The team may decide that transplant is not a safe treatment for you.
- You may need to see a specialist to give another opinion about an abnormal test or exam. This provider might be a cardiologist, infectious disease specialist, pulmonologist, or psychiatrist. These providers will then offer their opinions about your having a kidney/pancreas transplant.

After your full medical workup is done, we will send you a letter. This letter will tell you if you are approved for the national organ transplant waiting list.

### If You Are Denied for Transplant at UWMC

- If you are denied as a candidate at UWMC's transplant center, you can ask your nephrologist for a referral to another transplant center.

### If You Are Accepted for Transplant at UWMC

Once you are accepted for transplant at UWMC:

- **If you smoke, you must stop smoking before you can go further in the process.** This is because smoking:
  - Lowers your ability to survive transplant surgery
  - Increases your risk for infection, heart disease, and cancer

Ask the transplant social worker if you need a referral to a stop-smoking program.

- **You will need to make your final decision about transplant.**
  - The final decision about transplant is yours. A transplant is only a treatment for kidney disease or diabetes. It is not a cure.
  - If you do not think you can do what is needed before and after the transplant to get the best results possible, please think carefully about whether a transplant is the right choice for you. The transplant team will respect whatever decision you make.

## **Listing at More than One Center**

The United Network for Organ Sharing (UNOS) policy says that it is OK for you to be listed at more than one transplant center. Being listed at more than one center might shorten your wait time. But, there is no advantage to being listed at more than one transplant center in the same Organ Procurement Organization (OPO) area.

You can also transfer wait time from one transplant center to another, if you wish.

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### **Questions?**

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Transplant Services:  
206.598.3882