HOW THE KIDNEY TRANSPLANT SYSTEM VIOLATES TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

by

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This thesis is an examination of two ongoing civil cases regarding racial discrimination in kidney transplant waitlists. While these cases take place on opposite sides of the country, one in California and one in New York, they address the same issue. Both plaintiffs were men seeking kidney transplants and hoping to be put on the waitlist but have instead found themselves being discriminated against for being Black. Lawsuits have been filed against hospitals for violating Title VI of the Civil Rights Act of 1964, among other charges. It is the goal of this thesis to examine the validity of these claims and how the current kidney testing and waitlist process is disproportionately harming Black Americans. Various pieces of case law will be analyzed and applied to the cases at issue and additional relevant principles and guidelines will be reviewed. It is the contention of this author that both cases should be found in favor of the plaintiff, and there are sufficient facts and evidence to justify this ruling.

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Introduction

Black people have long been victims of the American medical field. When enslaved, Black bodies were not autonomous and were routinely taken advantage of and abused. The creation of medical schools allowed for this treatment to be institutionalized and hidden under the guise of medical experimentation. Through well-known instances such as the Tuskegee Syphilis Study (1932-1972)[1] and the racist mistreatment of Henrietta Lacks (1951)[2], the discriminatory practices that have been woven into American medicine have come to light. The mistake, however, is in thinking this is all in the past. One area of medicine that remains all too similar to those early days is the field of organ transplantation. Transplantation did not begin until later in the 20th century, and the procedures are still being refined today. Determining who qualifies for a transplant and their priority status is not an exact science. There are a number of factors that need to be considered by the doctors involved in the treatment. One of these factors is the level of kidney function. The lower the kidney function, the more urgently a transplant is needed. There are different tests that can be run to determine this, but all tests use a race-based coefficient. These tests are specifically analyzing the levels of creatine in an individual, which directly correlates to kidney function. During the days of the Tuskegee Syphilis Study, it was believed that race was biological, and people of different races were fundamentally different from one another. It was through this lens that kidney function tests were created. What has

[1] "Public Health Service Study of Untreated Syphilis at Tuskegee and Macon County, al - Cdc - OS," Centers for Disease Control and Prevention, January 9, 2023, https://www.cdc.gov/tuskegee/index.html#:~:text=The%20U.S.%20Public%20Health%20Service%20(USPHS)%20Untreated%20Syphilis%20Study%20at,after%20it%20was%20widely%20available.
[2] "The Immortal Life of Henrietta Lacks," Johns Hopkins Medicine, accessed May 8, 2024, https://www.hopkinsmedicine.org/henrietta-lacks/immortal-life-of-henrietta-lacks#:~:text=Henrietta%20Lacks%20was%20one%20of,line%20able%20to%20reproduce%20indefinitely.

resulted is a system where, even now that we know better, race is still a critical factor for determining eligibility for kidney transplant. Black patients are more likely to have kidney disease, but less likely to receive a transplant. This is not a fluke. This is the direct result of racial discrimination in kidney testing.

Unlike the days of the Tuskegee Syphilis Study and Henrietta Lacks, there are now more opportunities for patients who have been discriminated against. In response to the race-based coefficients used in kidney function testing, two lawsuits have been filed in the past five years. Both of these suits are ongoing and are the first of their kind to specifically address the issue of using these coefficients. The plaintiffs are each suing under Title VI of the Civil Rights Act of 1964. To reach a verdict in favor of the plaintiff, each will need to prove beyond a preponderance of the evidence that 1) the hospital they received treatment from received federal funding during the time of their treatment and 2) that over the course of that treatment they were discriminated against. It is the contention of this author that both of those facts can be proven to be more likely than not.

Title VI of the Civil Rights Act

This thesis will argue that the current system under which the waitlist for kidney transplants works violates Title VI of the Civil Rights Act. To make this argument, it is important to first establish the purpose of Title VI and how it has been judicially interpreted. Signed by President Lyndon Johnson in 1964, the Civil Rights Act was one of the most sweeping pieces of civil rights legislation in American history. The law "prohibited discrimination in public places, provided for the integration of schools and other public facilities, and made employment discrimination illegal."[3] A piece of legislation as all-encompassing as this had a tremendous legal impact and resulted in positive changes in many areas of our society. When addressing the relevance of this legislation to healthcare, the specific focus will be on the sixth prong of the act.

Title VI of the Civil Rights Act addresses nondiscrimination in federally assisted programs. The five subsections of this prong elaborate on this subject. No citizen can be excluded from, discriminated against, or denied benefits based on race by any program receiving federal funding. Programs that do receive federal funding are entitled to enact rules and regulations to ensure compliance with this non-discrimination policy. Any actions that go against the Civil Rights Act will be met with judicial review.[4] Ultimately, what is important to understand about this act is that no federally funded program can discriminate based on race, and if they do, legal action can be justifiably taken. This thesis intends to show that the current kidney transplant program is in violation of Title VI and that current lawsuits addressing this issue should be found in favor of the plaintiff.

[3] "Civil Rights Act (1964)," National Archives and Records Administration, accessed May 8, 2024, https://www.archives.gov/milestone-documents/civil-rights-act.
[4] ibid.

The Kidney Transplantation System

Kidney transplants are a lifesaving surgery that replace an unhealthy organ with a healthy one from a living or deceased donor. We have two kidneys that are each roughly the size of a fist, and they sit on either side of the spine just below the rib cage.[5] It is the job of the kidney to act as a filter in the body, removing waste from the blood. While the organs may be small, they are incredibly powerful, and each filter "about a half cup of blood every minute."[6] Waste is removed by "millions of filtering units called nephrons."[7] These nephrons remove excess liquid and waste from the blood as it enters the kidney, sending clean blood back into the body. A kidney transplant becomes necessary when these nephrons, or filters, stop working properly. When this happens, instead of waste being removed from the blood, blood containing "harmful levels of fluid and waste"[8] accumulates and can ultimately lead to the failure of the kidneys as well as other parts of the body. There are a number of health conditions that can lead to someone needing a kidney transplant. These include diabetes, chronic high blood pressure, and polycystic kidney disease.[9] While why someone needs a transplant may vary, one thing remains true across the board: when a patient needs a kidney transplant, their life depends on receiving it.

To understand how the current kidney transplant system violates Title VI of the Civil Rights Act, it is necessary to understand the different organizations involved in allocating organs and transplantation. While organ transplants were occurring prior to the 1980s, it was not until the National Organ Transplant Act of 1984 (NOTA) that transplantation became regulated on a

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[5] "Kidney Transplant," Mayo Clinic, March 28, 2024, https://www.mayoclinic.org/tests-procedures/kidney-transplant/about/pac-20384777.
[6] "Your Kidneys & How They Work - NIDDK," National Institute of Diabetes and Digestive and Kidney Diseases, accessed May 8, 2024, https://www.niddk.nih.gov/health-information/kidney-disease/kidneys-how-they-work.
[7] ibid.
[8] ibid.
[9] ibid.

federal level. It was the intent of NOTA "to ensure an equitable allocation of donor organs and to increase the number of organs available for transplant."[10] This would be done by establishing the Organ Procurement and Transportation Network (OPTN). The OPTN would be the means by which organs could be regulated and managed on a federal level. The private nonprofit United Network for Organ Sharing (UNOS) acts as "the OPTN under contract with the U.S. Department of Health and Human Services."[11] UNOS's contract with the U.S. Department of Health and Human Services is what provides it with federal funding, which is a key element in proving violation of Title VI of the Civil Rights Act. What is also important to note is that in the United States, each hospital or transplant facility must work with UNOS and its organizations. This is because of the Omnibus Reconciliation Act of 1986. This act "requires that all medical centers performing organ transplantation participate in the OPTN or forfeit their eligibility for federal Medicare and Medicaid payment."[12] To keep federal funding, hospitals must opt into this system; there is no current alternative.

When discussing how the kidney transplant process violates Title VI of the Civil Rights Act, cases will be focused primarily on the transplant waitlist system and process. This process falls under the jurisdiction of UNOS. The reason for this particular focus is that there is a specific test done when considering patients for transplant, and that test discriminates based on race. When measuring kidney function, doctors must measure the estimated glomerular filtration rate

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[10] Catharyn T. Liverman, Sarah Domnitz, and James F. Childress, Opportunities for Organ Donor Intervention Research Saving Lives by Improving the Quality and Quantity of Organs for Transplantation (Washington, D.C: National Academies Press, 2018).

[11] Unosadmin, "National Organ Transplant Act Enacted 30 Years Ago," UNOS, June 17, 2021, https://unos.org/news/national-organ-transplant-act-enacted-30-years-ago/#:~:text=On%20October%2019%2C%201984%2C%20the,of%20other%20transplant%20networks%20worldwide.

[12] ibid.

(eGFR). This "measures your level of kidney function and determines your stage of kidney disease."[13] This test is incredibly important as the level of kidney function is one of the primary determinants in deciding a patient's place on the waitlist. These tests are discriminatory because of a race-based coefficient that is added to the results of these tests. The developers of the eGFR test "noticed that Black Americans produce a higher level of creatine…[and] added a race-based coefficient that inflates the scores of Black residents by 16-18%."[14] An inflated score means that Black patients look healthier than they actually are. Lawsuits have currently been filed to address these eGFR test and how they are disproportionately impacting African American Patients.

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[13] "Kidney Failure Risk Factor: Estimated Glomerular Filtration Rate (Egfr)," National Kidney Foundation, November 16, 2023, https://www.kidney.org/content/kidney-failure-risk-factor-estimated-glomerular-filtration-rate-egfr#:~:text=The%20estimated%20glomerular%20filtration%20rate,%2C%20body%20size%2C%20and%20gender

[14] Eric Kolenich, "Richmond's Organ Transplantation Network Sued over Racial Equity Issue," Richmond Times-Dispatch, April 12, 2023, https://richmond.com/life-entertainment/health-med-fit/unos-organ-transplantation-network/article_cdbcbc24-d87c-11ed-8607-5ba6d8f4eeed.html#:~:text=A%20California%20man%20has%20filed,than%20people%20of%20other%20races.

Jordan Crowley v. Strong Memorial Hospital of the University of Rochester; Kaleida Health; and UBMD Physician's Group

As it stands today, there are two active lawsuits addressing the issue of racial discrimination in the kidney transplant process. The first to be filed was the case of *Jordan Crowley v. Strong Memorial Hospital of the University of Rochester; Kaleida Health; and UBMD Physician's Group.* Taking place in New York state, this case addresses the medical care given to 22-year-old Jordan Crowley. Crowley was born with "only a single shrunken kidney, which has been experiencing a loss in function."[15] As a result, he has spent much of his life going to different nephrologists and seeking medical care in regard to his kidney. On numerous occasions, a kidney transplant was mentioned to Crowley as a good treatment option. In order to be placed on the transplant waitlist, Crowley underwent eGFR testing to check the function of his kidney. Crowley is biracial, his parents are Caucasian and Black. When he underwent testing, "Jordan was told by Strong Hospital's transplant team that the hospital's 'computer system was having problems determining Jordan's status' because it had to categorize Jordan as either Black or non-Black for the kidney assessment."[16] At this point, Crowley learned that the results would be interpreted differently based on the race he was categorized as. He was categorized as Black on the test and taken off the transplant list because of his eGFR score (which had been adjusted with a race-based coefficient in 2018.[17] Since 2019, Crowley has continuously bounced back and forth from being taken on and off the kidney transplant waitlist.

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[15] Jordan Crowley v. Strong Memorial Hospital of the University of Rochester; Kaleida Health; and UBMD Physician's Grou (United States District Court Western District of New York October 1, 2021).

[16] ibid.

[17] ibid.

Due to the racial discrimination Crowley faced in the eGFR testing and the negative impact it has had on his ability to receive a kidney transplant, he has filed a lawsuit against the hospitals and medical providers involved in his treatment. He is suing under Title VI of the Civil Rights Act of 1964, the Patient Protection and Affordable Care Act, and the New York State Human Rights Act.[18] Taken together, this is a racial discrimination lawsuit alleging that but for the defendant's actions, Crowley would have remained on the kidney transplant waitlist. When looking specifically at the claims made under Title VI of the Civil Rights Act, all defendants in the case were allegedly receiving federal financial assistance during all periods in which they were treating Crowley.[19] As a result, all defendants were obligated to not treat him in any discriminatory manner. By doing so, the plaintiff is alleging that they are in violation of Title VI. On October 1, 2021, the plaintiff requested that this case be a jury trial.[20] As of May 2024, the case has yet to go to trial and a verdict has yet to be reached.

The premise of this case clearly demonstrates how race plays a critical role in determinants of health and the ways in which Black patients are discriminated against. Had Crowley not been labeled as Black in his eGFR testing, he alleges, he would still be on the transplant waitlist today. The fact that his providers so clearly stated their confusion about how to approach his testing because he was biracial goes to prove that the treatment he received was in part dictated by his race. Should a jury find in favor of Crowley, it would force his medical providers to rethink the way they treat their patients. Given the nature and merit of Crowley's claims, it is the contention of this author that the jury should find in favor of the plaintiff.

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[18] ibid., pp. 11
[19] ibid.
[20] ibid.

Anthony Randall v. UNOS and Cedars Sinai Health Ventures

The case of *Anthony Randall v. UNOS and Cedars Sinai Health Ventures* is the second ongoing lawsuit that addresses racial discrimination in kidney transplants. This case holds many similarities to *Crowley* in fact patterns and the laws that are being addressed, but there are also some important distinctions between the two. The plaintiff in this case, Anthony Randall, was a kidney patient at Cedars Sinai Hospital. Randall was a barber in Los Angeles, but because of his kidney disease he could no longer go to work. Instead, he had to go to Cedars Sinai three days a week to receive dialysis.[21] Kidney dialysis is an hours long and uncomfortable procedure, so Randall has been placed on the waitlist in hopes of finding a better solution. Just as in the case of *Crowley,* Randall's place on the transplant was determined in part by his eGFR levels. The average patient waits three to four years for a kidney transplant, but Randall has been on the waitlist for over five.[22] Randall believes that his extended time on the waitlist is the direct result of the race-based coefficient used in eGFR testing and is suing UNOS and Cedars Sinai Health Ventures as a result.

This civil case is taking place in a federal court in Los Angeles, California. This is the first lawsuit to be brought against UNOS regarding racial discrimination in the kidney transplant process. As a result, the outcome of this case has the power to not only shape the way kidney allocation is done in the United States but will set a precedent that will be relied on in cases to come. Randall has put in a request with the court that this will be a class action lawsuit where, in addition to himself, he will "represent 27,500 Black U.S. patients, who he argues have been

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[21] Lenny Bernstein, Black man awaiting kidney transplant alleges racial bias , April 10, 2023, https://www.washingtonpost.com/health/2023/04/10/lawsuit-unos-kidney-transplant-race-discrimination/.
[22] ibid., pp. 10

similarly disadvantaged."[23] The plaintiff is suing both UNOS and Cedars Sinai health Ventures for their roles in discriminating against African American patients. The lawsuit is being brought on four different grounds: violation of Title VI of the Civil Rights Act of 1964, violation of the Unruh Civil Rights Act, breach of fiduciary duty, and violation of California's Unfair Competition Law. The plaintiff is seeking $5 million in damages.[24]

As of May 2024, the case has currently received a complaint and answer, but there have yet to be any additional motions or proceedings. What has developed in the meantime, however, is a change in UNOS's policy on race-based coefficients in eGFR testing. In January of 2023, "UNOS instructed hospitals to stop using that part of the algorithm and to notify Black patients waiting for kidneys that they might be eligible for adjustments of their 'accrued wait time.'"[25] Given that Cedar Sinai falls under the authority of UNOS, they were obligated to follow. This directive. Despite the instruction, it was not until "March 27, when it was said it would begin a review that could take several months."[26] The fact that this change was made indicates that there was wrongdoing and discrimination on the part of UNOS and Cedar Sinai Hospital. When the plaintiff was made aware of this policy change, maintained that the "'wait time continues to be incorrectly calculated in UNOS's UNet software, prejudicing the Plaintiff's candidacy for a donor kidney from the national kidney waitlist.'"[27] UNOS has yet to release a statement in response to this given the ongoing nature of the case.

[23] ibid., pp. 13
[24] ibid., pp. 10
[25] ibid., pp. 13
[26] ibid.
[27] ibid.

eGFR Testing Today

A patient's estimated glomerular filtration rate (eGFR) still needs to be measured to determine kidney function and place them on the transplant waitlist. Numerous tests can calculate this value, such as CKD MDRD (Modification of Diet in Renal Disease) and CKD EPI (Chronic Kidney Disease Epidemiology Collaboration).[28] The CKD EPI formula is thought to be more accurate, but *both* include a race-based coefficient.[29] What this race-based coefficient does specifically is alter the results of Black patients by reporting a different creatine level than what is measured. This is because, when the test was first created, it was believed that race was biological and Black patients would inherently have different creatine levels than other patients. This is untrue. A 2020-2021 joint task force made up of the National Kidney Foundation (NKF) and the American Society of Nephrology (ASN) set out "to review the use of race in eGFR calculations"[30]. The nature of having a race-based coefficient clearly indicates that race was playing a critical role in testing outcomes. The task force concluded that these race-based coefficients should not be used, and "announced a new race-free calculation for estimating eGFR"[31] on September 23, 2021. Adapting these new formulas seems to be something that will not happen instantaneously but over many years.

While changing medical practices certainly takes time given the need to educate health workers and potentially acquire new medical equipment, as of 2024 it is unclear what is preventing hospitals from making this change more quickly. In a statement from Cedars Sinai Hospital, "there eventually will be new tools that will be more accurate in estimating GFR.

[28] "Race and EGFR: What Is the Controversy?," National Kidney Foundation, December 6, 2021, https://www.kidney.org/atoz/content/race-and-egfr-what-controversy.
[29] ibid.
[30] ibid.
[31] ibid.

When that happens, we will adopt them. But our intent in taking this action is not to entirely remove consideration of race".[32] While it is certainly important to consider factors that may impact a patient's health, including race in eGFR levels does nothing but harm patients. Patients should be looked at holistically, and changing data based on race prevents this from happening.

When thinking about these changes in reference to the ongoing lawsuits against medical providers, the conclusions found by the joint task force bolster the claims of both plaintiffs. Title VI of the Civil Rights Act prohibits discrimination or denial of care based on race. The NKF and ASN concluding that race-based coefficients should not be used in eGFR testing gives weight to the allegation that those coefficients are discriminatory. To suggest that a new method of testing should be used heavily implies that there were flaws with the previous methods of testing, and that those past methods could have led to disparate outcomes of care for Black patients.

[32] Removing the racial coefficient from calculations of EGFR, accessed May 8, 2024, https://reports.mountsinai.org/article/neph2021-07-egfr-and-race.

Relevant Case Law

When thinking about the outcome and implications of *Anthony Randall v. UNOS and Cedars Sinai* and *Jordan Crowley v. Strong Memorial,* it is important to consider how case law and precedent will guide and influence the decision. Prior to this case, there were no previous rulings specifically regarding eGFR testing and kidney transplants, but there remain several healthcare and discrimination cases whose rulings and precedents can be applied to the issues at hand.

Brown v. Board of Education (1954)

The case of *Brown v. Board of Education* (1954) was a landmark civil rights case that abolished the doctrine of "separate but equal" that was created by *Plessy v. Ferguson* (1896). More specifically, this case outlawed racial segregation in public schools by declaring the practice unconstitutional. The case came to the Supreme Court as a result of Black families filing lawsuits against schools for segregation in a multitude of states, and Oliver Brown was the lead plaintiff.[33] The case of *Brown v. Board of Education* was decided unanimously in favor of the plaintiff, with Chief Justice Earl Warren writing the majority opinion. In this, he describes how segregation in public schools violated the Equal Protection Clause within the 14th Amendment and inherently created feelings of inferiority in Black children.[34] This ruling was a pivotal moment in the Civil Rights Movement and created a new era of legal precedent that promoted equality and integration. Shifting the focus of the court to creating a more equitable society would have incredible long-term benefits as more steps towards equality in all areas were able to be taken.

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[33] Brown v. Board of Education of Topeka , n.d., https://www.oyez.org/cases/1940-1955/347us483.
[34] ibid.

The legal precedent established by *Brown v. Board of Education* mirrors the principles that are outlined in Title VI of the Civil Rights Act of 1964. In both cases, promoting equal treatment under the law and eliminating racial discrimination is an absolute priority. *Brown v. Board of Education* specifies the harmful effects that racial discrimination can have on children, and thus the population as a whole.[35] Title VI of the Civil Rights Act prohibits racial discrimination in programs that receive federal funding.[36] The legal framework of the Civil Rights Act extends the spirit of *Brown* to sectors that were not previously covered by this case law. Coupled together, it is made clear that racial disparities and unequal access to care are unacceptable. For these reasons, the case of *Brown v. Board of Education* is an important piece of case law when considering *Anthony Randall v. UNOS and Cedars Sinai* and *Jordan Crowley v. Strong Memorial.*

When applying this case law to the suits filed by Anthony Randall and Jordan Crowley, *Brown* serves as a guiding principle for promoting justice and equality. The same way that *Brown* recognizes the harms inherent in the segregation of education, *Randall* and *Crowley* bring to light how racial disparities in healthcare also have detrimental impacts. By bringing the suit under Title VI of the Civil Rights Act, *Randall* and *Crowley* highlight the obligation that healthcare institutions have to ensure equal access to transplant services. The issue of eliminating racial inequality in kidney transplant waitlists embraces the spirit of *Brown* and the dismantling of racist institutions and processes. A ruling in favor of the plaintiffs in the cases of *Randall* and *Crowley* furthers the legacy that was set forth in *Brown v. Board of Education*.

[35] ibid., pp. 17
[36] ibid., pp. 7

Simkins v. Cone (1963)

Simkins v. Cone (1963) was a critical case in addressing racial inequality within the healthcare system. The case was brought by dentist George Simkins Jr. first in the North Carolina district court and then in the Fourth Circuit Court of Appeals.[37] The Supreme Court refused to hear the case. *Simkins* was a class-action lawsuit brought against the Moses Cone and Wesley Long Community Hospitals. The plaintiffs argued that the hospital's segregation policy violated the rights given to them by the Equal Protection Clause of the 14th Amendment.[38] What is of particular importance, in this case, is the fact that despite being a private institution, the hospital received public funding and was therefore subject to constitutional scrutiny. The Fourth Circuit Court of Appeals ultimately ruled in favor of the plaintiff, establishing that federally funded healthcare institutions are obligated to provide equal access to medical services regardless of race.[39]

The legal principles established in *Simkins v. Cone* created a key framework when it comes to advocating against discriminatory practices in medical institutions. *Simkins* took place the year before the Civil Rights Act was passed and set a standard for how racism in healthcare settings should be addressed. The 1963 case confirmed that hospitals and their medical care are subject to constitutional scrutiny because of the funding they receive.[40] This same legal principle can be directly applied to the cases of *Anthony Randall v. UNOS and Cedars Sinai* and *Jordan Crowley v. Strong Memorial.* Part of what the plaintiffs will need to show is that because the

[37] Ezelle Sanford III, "Civil Rights and Healthcare: Remembering Simkins v. Cone (1963)," AAIHS, February 7, 2017, https://www.aaihs.org/civil-rights-and-healthcare-remembering-simkins-v-cone-1963/.
[38] ibid.
[39] ibid.
[40] ibid.

hospitals that administered care received federal funding, they should be held to the standards set in the Civil Rights Act. This case law goes to prove just that.

Griggs v. Duke Power Co. (1971)

The case of *Griggs v. Duke Power Co*. is a 1971 employment discrimination case. Brought by Willie Griggs on behalf of himself as well as several other African American employees at Duke Power Company, this case challenged an inside transfer policy at the company.[41] Griggs alleged that this transfer policy discriminated against African Americans due to the nature of the transfer requirements. Specifically, the plaintiff said that this policy stood in violation of Title VII of the Civil Rights Act.[42] This case was originally dismissed by a district court but heard by the Supreme Court after they granted certiorari on appeal. The Warren court ruled unanimously in favor of Griggs. They found that the transfer requirements did indeed disproportionately impact African Americans and that the purpose of these requirements was primarily racial discrimination.[43]

While the case of *Griggs v. Duke Power Co.* addresses the Civil Rights Act, the most important doctrine highlighted in the ruling is that of disparate impact. The Warren court established that practices that result in a disparate impact, even if they are not overtly discriminatory, are unlawful under the Civil Rights Act of 1964.[44] This is an important shift because it changes the focus from the intention of a defendant to the impact that their actions had on the plaintiff. Changing this expands the scope under which cases could be brought under the Civil Rights Act. This legal interpretation underscores that when examining discrimination in

[41] Griggs v. Duke Power Company , n.d., https://www.oyez.org/cases/1970/124.
[42] ibid.
[43] ibid.
[44] ibid.

cases, the outcome and impact must receive just as much if not more focus than any intention. By acknowledging disparate impact, the Warren court acknowledged that systemic biases could perpetuate inequality even when there is not an explicit intent to do so.

In lawsuits such as *Anthony Randall v. UNOS and Cedars Sinai* and *Jordan Crowley v. Strong Memorial,* the legal precedent set by *Griggs* could have major implications. It is established that despite intent, if actions result in a disparate outcome, they violate the Civil Rights Act. When it comes to eGFR testing and the time African Americans spend on kidney transplant waitlists, regardless of intent, there is a clear disparate impact. The systemic biases that have impacted the process of kidney testing have resulted in outcomes that disproportionately impact African Americans, and under Griggs those outcomes qualify as sufficient to prove discrimination under the Civil Rights Act of 1964.

Lau v. Nichols (1974)

Lau v. Nichols (1974) was a landmark Supreme Court case that addressed discrimination within the education system. When the San Francisco school system was integrated, thousands of Chinese students were brought into schools taught exclusively in English, despite that not being a language all students were fluent in. A class action lawsuit, led by Lau on behalf of other students of Chinese descent, sued the San Francisco Unified School district under the Fourteenth Amendment and the Civil Rights Act of 1964.[45] Relief was denied by the district and Ninth Circuit courts, but the Supreme Court found in favor of the plaintiffs. The court ruled unanimously in favor of Lau, finding that failure to provide equal access to services, in this case education, was in violation of the Civil Rights Act.[46]

[45] "Lau v. Nichols (1974)," Oyez, accessed May 20, 2024, https://www.oyez.org/cases/1973/72-6520.
[46] ibid.

While the discrimination in the case of *Lau* is different than that of *Crowley* and *Randall*, the same principles can be applied in all cases. The primary principle to be examined in both cases is that of disparate impact. When it comes to disparate treatment, in *Lau v. Nichols*, students of Chinese descent were receiving a lower quality education on the basis of race. There were no supplemental English courses offered at California schools, so simply because they were Chinese, students were receiving worse treatment than their English speaking counterparts.[47] This is comparable to Randall and Crowley and the medical treatment they have received. Simply because they are Black, they are receiving different care than their white counterparts. Their eGFR levels are altered on the basis of race alone, creating a disparate impact wherein they are less likely to receive a transplant. Students receiving a worse education and patients receiving worse medical care both on the basis of race alone violate the same principle.

These cases also both go to show the impact of neglect. In *Lau*, the lack of translation or language assistance negatively impacted Chinese student's ability to learn. By withholding resources and care, harm was done. This same concept can be applied to a medical setting as is seen in *Crowley* and *Randall*. Failing to provide Black patients with the same kidney testing as white patients negatively impacts their ability to be placed on the kidney transplant waitlist. Failure to provide resources on the basis of race alone clearly qualifies as discrimination and is prohibited by the Civil Rights Act. The case of *Lau v. Nichols* can be used in deciding these kidney transplant cases through the precedent set that discrimination based on national origin by institutions receiving federal funding is illegal under Title VI of the Civil Rights Act.

[47] ibid., pp. 21

Additional Relevant Principles

OPTN Policy

In issues of racial discrimination in organ transplantation, consulting the regulations outlined by the Organ Procurement and Transplantation Network (OPTN) can provide guidance as to how medical facilities should be conducting their care. UNOS is contracted by OPTN, so they have an obligation to adhere to all OPTN regulations. Section 5.4: Organ Offers of the OPTN policy states "allocation of deceased donor organs must not be influenced positively or negatively by political influence, national origin, ethnicity, race, sex, religion, or financial status."[48] When describing the various administrative rules and definitions, it is stated that "GFR can be measured directly or estimated (eGFR) using various formulae. Formulae used to calculate an eGFR must not use a race-based variable."[49] Whether or not medical facilities are following these regulations is critical to consider in cases such as *Crowley* and *Randall* because failure to comply not only shows a violation of policy but erodes trust in the healthcare system.

AMA Code of Ethics

In medical cases alleging racial discrimination, the American Medical Association's (AMA) Code of Ethics plays an important role. This code outlines the standards to which healthcare workers and organizations must adhere, emphasizing the values of non-discrimination, justice, and beneficence.[50] When placed in the context of kidney transplants, adhering to these ethical standards is an absolute necessity. In cases such as *Anthony Randall v.*

[48] "OPTN Policies Effective as of April 2, 2024 [Expedited ...," OPTN, accessed May 9, 2024, https://optn.transplant.hrsa.gov/media/eavh5bf3/optn_policies.pdf.
[49] ibid.
[50] "Physicians & the Health of the Community," AMA, accessed May 9, 2024, https://code-medical-ethics.ama-assn.org/chapters/physicians-health-community.

UNOS and Cedars Sinai and *Jordan Crowley v. Strong Memorial*, the AMA Code of Ethics serves as a benchmark against which medical practices can be evaluated. These codes emphasize the importance of putting the health of patients over any outside biases. The AMA Code of Ethics is comprised of numerous chapters, the most important one in this context being Chapter 8: Physicians & the Health of the Community. This chapter focuses on the obligation held by physicians to promote public health in their community and take on somewhat of an activist role.[51] Rule 8.5 specifically addresses disparities in health care, stating:

> Differences in treatment that are not directly related to differences in individual patients' needs or preferences constitute inappropriate variations in health care. Such variations may contribute to health outcomes that are considerably worse in marginalized populations. Physicians are ethically called on to provide the same quality of care to all patients without regard to medically irrelevant personal characteristics.[52]

When applied to the issue of racial discrimination in eGFR testing and the waitlist for kidney transplantation, discriminating against Black patients by using a race-based coefficient in eGFR testing directly violates Chapter 8.5 of the Code of Ethics. To adhere to Chapter 8.5 would be to not let racist tests negatively impact the quality of care given to patients.

[51] ibid., pp. 23
[52] ibid.

Impact of Finding in Favor of Defense

In the cases of *Anthony Randall v. UNOS and Cedars Sinai* and *Jordan Crowley v. Strong Memorial*, finding in favor of the defense in either case would set a dangerous precedent. These cases are fighting for the civil rights of patients undergoing kidney transplants. Under Title VI, it is argued that medical facilities have an obligation to treat all patients equally and get them the help they need to the best of the doctor's ability. As a result of eGFR testing, that treatment was not provided equally to Black patients. To find in favor of the defense in either of these cases would reinforce the idea that medical testing can use race as a basis to discriminate against minority patients.

The outcome of Anthony Randall's lawsuit has the potential to justify harm against patients in the future should the court find in favor of the defense. Randall has asked for his case to be a class action lawsuit,[53] and if that request is granted, then any ruling will have an even larger impact and the potential to set a more wide-reaching precedent. Should the court find in favor of the defense, it will be established that Black patients can be placed on the kidney transplant waitlist for an egregious amount of time without the opportunity for justice. To this day, white patients receive kidney transplants at a higher rate than Black patients despite having a lower rate of kidney disease. A ruling in favor of the defense will prevent any remedy to this from being sought in the future.

In the case of *Jordan Crowley*, finding in favor of the defense would have a profound impact on interracial patients seeking kidney transplants. Testing currently requires that patients be classified as Black on non-Black. While a task force has recommended use of a new kidney function test, to date there is no new methodology that has been implemented in hospitals in any

[53] ibid., pp. 13

large scale. What this means is that eGFR testing is still being used today, so the outcome of *Jordan Crowley v. Strong Memorial* will have an impact on patients. If the court were to find in favor of the defense, hospitals could justify classifying interracial patients as Black and putting them farther down the kidney transplant waitlist as a result. The case of *Crowley* would also be used in future lawsuits as evidence supporting a hospital's use of eGFR testing, ultimately making it more difficult to make positive change in the future. A ruling in favor of the plaintiff would be a push to eliminate current eGFR testing with a race-based coefficient and could provide future plaintiffs with precedent that would support their argument should cases of a similar nature arise in the future.

Across these two cases, there are a number of organizations being held accountable for their involvement in the kidney transplant waitlist process. Hospitals, health providers, and UNOS have all been named as defendants across these two suits which is appropriate and works to encompass all of the parties involved in the process. Each of these groups has had the power to help Black patients receive more equitable treatment, and each of these groups have failed. Holding each of these parties accountable for the part they played in discrimination will help promote greater accountability and change in the future. If the cases were be dismissed or found for the defense, there would be no incentive for any of these organizations to make change towards more equitable testing. Further, given the incredibly limited number of cases surrounding organ transplantation, each case that receives a ruling should be given great weight as case law when determining future cases. This makes these rulings incredibly important for the future of health care law. If we are to continue to move towards more equitable treatment, both cases can and should be found in favor of the plaintiff.

Patient Impact

Should the court find in favor of the plaintiff in either or both cases, there would be a positive impact on Black patients. While "33% of American adults are at risk for kidney disease,"[54] the likelihood of someone getting kidney disease varies based on the patients race. This is not because there is any biological difference between races that make one group any more or less likely to have kidney disease, but rather because of the impact racial discrimination can have on health outcomes. African Americans are over three times as likely "to have kidney failure compared to White Americans."[55] This increased rate of kidney disease can best be explained by the negative health impacts increased stress and racial discrimination can have on an individual. Black Americans have higher rates of heart disease, blood pressure, diabetes, and obesity, which can all lead to an increased risk of kidney disease.[56] While changing eGFR testing would not result in a change in the number of Black patients who come in with kidney disease, it would result in more positive outcomes for those that are treated.

A 2023 study on race and kidney transplant waitlist status examined which demographics are most impacted by discrimination. This study in particular focused on patients who were already receiving dialysis. Black patients were 27%, 12%, and 20% less likely to be placed on a waitlist compared to white patients for ages 18-29, 50-64, and 65-80 years, respectively.[57] What these statistics show is that younger African American patients are the most heavily discriminated against when it comes to placement on a transplant waitlist. The study was able to

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[54] "Race, Ethnicity, & Kidney Disease," National Kidney Foundation, May 9, 2024, https://www.kidney.org/atoz/content/minorities-KD#:~:text=Black%20or%20African%20Americans%20are,the%20risk%20for%20kidney%20disease.
[55] ibid.
[56] ibid.
[57] Jade Buford et al., "Race, Age, and Kidney Transplant Waitlisting among Patients Receiving Incident Dialysis in the United States," *Kidney Medicine* 5, no. 10 (October 2023): 100706, https://doi.org/10.1016/j.xkme.2023.100706.

conclude that this disparity remains consistent 'across sex, insurance type, body mass index, pre-kidney failure nephrology nephrology care, primary cause of kidney failure, and neighborhood poverty subgroups."[58] This goes to show that is race, rather than any other demographic factor, most heavily impacting a patient's ability to receive a kidney transplant. Should the court rule in favor of the plaintiff in these cases, it would be this younger demographic that would benefit the most heavily.

A ruling in favor of the plaintiff would, hopefully, encourage medical institutions to eliminate race-based coefficients with eGFR testing. If this were to be done, it has been found that "removing the race coefficient would reclassify 3.1% of Black patients,"[59] making them eligible for a kidney transplant referral. With the hundreds of thousands of patients suffering from kidney failure, a difference of three percent means that tens of thousands of patients will become eligible to receive a kidney transplant. These are patients that would have already been put on the waitlist if they were white, but their eGFR levels have been altered because of their race. Another study argues that removing the race-based coefficient would result "in one third of Black patients reclassified to a more severe stage of CKD"[60] (chronic kidney disease). Reclassification does not inherently mean patients will be placed on the transplant waitlist, but it does increase the odds of that happening. By eliminating the race-based coefficient, thousands of people would be able to receive lifesaving surgery.

[58] ibid., pp. 27
[59] Prabhdeep Uppal et al., "The Case Against Race-Based GFR," *Delaware Journal of Public Health* 8, no. 3 (August 31, 2022): 86–89, https://doi.org/10.32481/djph.2022.08.014.
[60] ibid.

Future Precedent

Given the limited number of organ transplant cases that have occurred thus far, the outcomes of *Anthony Randall v. UNOS and Cedars Sinai* and *Jordan Crowley v. Strong Memorial* have the potential to create precedent that will be followed in a number of future cases. Kidney transplants are not the only area in the field of medicine that include racist testing and practices. For this reason, it is more likely than not that cases will continue to be brought in the future addressing the various parts of healthcare that disproportionately harm patients of color.

Liver Transplantation

In the world of liver transplantation, Black patients are once again underrepresented. Studies have shown that patients who are African American are less likely to be evaluated for transplant and placed on the waitlist than their white counterparts.[61] Similar to the case of kidney transplantation, these rates are not a reflection of any inherent biological difference, but rather the result of disparate treatment and the impact racial discrimination has on health. Patients are evaluated for transplant based on their Model for End-Stage Liver Disease (MELD) score. While MELD scores do not use a race based coefficient the same way the eGFR does, Black patients have less access to this list than white patients. [62] A lawsuit filed alleging racial discrimination in the liver transplant and waitlist process could use the precedent set in the cases of *Randall* and *Crowley* (assuming a ruling in favor of the plaintiff) to provide weight to their argument. In both cases, lack of care based on race violates Title VI of the Civil Rights act. These cases could

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[61] Curtis Warren et al., "Racial Disparity in Liver Transplantation Listing," *Journal of the American College of Surgeons* 232, no. 4 (April 2021): 526–34, https://doi.org/10.1016/j.jamcollsurg.2020.12.021.
[62] "Black Patients with Liver Disease May Face Obstacles to Placement on the Liver Transplant Waitlist," WCM Newsroom, July 2, 2021, https://news.weill.cornell.edu/news/2021/07/black-patients-with-liver-disease-may-face-obstacles-to-placement-on-the-liver.

allow the way in which the liver transplant waitlist operates to become more equitable should lawsuits be filed.

Childbirth

While not related to organ transplantation, childbirth is another field in which health outcomes change based on a patient's race. "Black women are three to four times more likely to experience complications during pregnancy and childbirth and die from these complications compared to white women."[63] These complications are not without remedy, as proper medical care before and during birth could mitigate these risks and lower mortality rates. Institutionalized racism has Black women receiving poorer medical care than white women, and medical myths state that Black women have a higher pain tolerance.[64] When Black women are mistreated in the medical field, if there were preexisting case law establishing this conduct as illegal, they would be better able to take legal action. While there is a long history of this conduct, there is very limited case law that allows for legal redress. Should the cases of *Randall* and *Crowley* be found in favor of the plaintiffs, there would be a precedent set that could be used to improve the medical treatment of Black women. If mistreatment based on race could be proven, these cases could be used to bolster the unacceptability of those practices.

Type 1 Diabetes

Racial discrimination is both prevalent and deadly when it comes to Black Americans with Type 1 Diabetes (T1D). Black patients are twice as likely to die from their T1D compared

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[63] Brittany D. Chambers et al., "Clinicians' Perspectives on Racism and Black Women's Maternal Health," *Women's Health Reports* 3, no. 1 (May 1, 2022): 476–82, https://doi.org/10.1089/whr.2021.0148.
[64] ibid.

to white patients.[65] This increased mortality rate is caused by a lack of access to medical devices and medical treatments. Black patients are nearly three times as likely to suffer from diabetic ketoacidosis, or incredibly high glucose levels, which can be very dangerous.[66] When it comes to access to insulin pumps and continuous glucose monitoring (CGM) systems, white patients are twice as likely to have access to these lifesaving medical devices.[67] While limited access to medical supplies is often based in institutional racism and inequality, at the heart of the issue is racism in medical access and care. For this reason, any precedent set by *Randall* and *Crowley* would apply in cases brought against hospitals for discrimination of care. When applied to the issue of T1D, this precedent also shows how wide reaching the impacts of medical racism can be.

Additional Civil Rights Cases

The same way previous civil rights cases can be applied to issues of medical racism, any precedent set by *Randall* and *Crowley* can be used as case law in future civil rights issues. Whether or not the behavior of medical providers and hospitals violates Title VI of the Civil Rights Act will serve as guidance in cases to come. It will create precedent as to what specific actions qualify as a violation of this act. Additionally, as in the case of *Griggs*, a ruling could bring to light additional civil rights issues and principles to be followed in the future.

[65] Shideh Majidi et al., "Inequities in Health Outcomes in Children and Adults with Type 1 Diabetes: Data from the T1D Exchange Quality Improvement Collaborative," *Clinical Diabetes* 39, no. 3 (July 1, 2021): 278–83, https://doi.org/10.2337/cd21-0028.
[66] ibid.
[67] ibid.

Conclusion

The cases of *Anthony Randall v. UNOS and Cedars Sinai* and *Jordan Crowley v. Strong Memorial* are still ongoing and draw attention to the continued issue of racial discrimination in United States healthcare. The fact patterns of these cases tell the story of patients who put their trust in doctors, only to find that the very tests being done will keep them from receiving the care that will save their lives. As an outsider, it can be difficult to comprehend how such blatant racial discrimination has continued. The tests that are conducted to test kidney function include a race-based coefficient. Changing the data collected is done entirely on the basis of race and is not disguised as anything else. What Jordan Crowley overheard in his hospital room was the doctors trying to figure out what race to classify him as. The reason that mattered to them was because the final results of his test would vary based on his race, and his treatment would change as a result. Crowley and Randall have rightfully brought lawsuits against the hospitals who treated them and failed to get them the lifesaving procedures that they need.

Bringing these lawsuits under Title VI of the Civil Rights Act demonstrates how racial discrimination is still such an integral part of the healthcare system. Prior to these lawsuits it was not hidden or unknown that these eGFR tests relied on race, that fact was just not advertised to patients. Case law shows that hospitals do receive federal funding and for that reason can be held responsible under Title VI of the Civil Rights Act for their discriminatory actions. The practice of eGFR testing was racially discriminatory, and the health providers in question should be found liable.

A ruling in favor of the plaintiffs in this case would hold healthcare facilities to a higher standard. It would create a new precedent that would hold hospitals liable for racially discriminatory practices when conducting tests on patients. This same precedent could be applied

across the board for other tests relating to transplant, improving the quality of care patients receive. Even with a negative outcome in these cases, the joint task force of NKF and ASN have put forth a recommendation that the current kidney testing methods no longer be used, and a replacement be found. While healthcare facilities seem to endorse this conclusion, there is currently little incentive for quick implementation of a new method. Giving patients the opportunity to receive financial compensation for racially discriminatory care could serve as that incentive to develop new testing methodology. Failure to implement change quickly will result in the deaths of hundreds if not thousands of Black patients who are sicker than their tests reveal, and unable to get lifesaving surgery as a result.

Bibliography

Bernstein, Lenny. Black man awaiting kidney transplant alleges racial bias , April 10, 2023. https://www.washingtonpost.com/health/2023/04/10/lawsuit-unos-kidney-transplant-race-discrimination/.

"Black Patients with Liver Disease May Face Obstacles to Placement on the Liver Transplant Waitlist." WCM Newsroom, July 2, 2021. https://news.weill.cornell.edu/news/2021/07/black-patients-with-liver-disease-may-face-obstacles-to-placement-on-the-liver.

Brown v. Board of Education of Topeka , n.d. https://www.oyez.org/cases/1940-1955/347us483.

Buford, Jade, Samantha Retzloff, Adam S. Wilk, Laura McPherson, Jessica L. Harding, Stephen O. Pastan, and Rachel E. Patzer. "Race, Age, and Kidney Transplant Waitlisting among Patients Receiving Incident Dialysis in the United States." *Kidney Medicine* 5, no. 10 (October 2023): 100706. https://doi.org/10.1016/j.xkme.2023.100706.

Chambers, Brittany D., Brianne Taylor, Tamara Nelson, Jessica Harrison, Arielle Bell, Allison O'Leary, Helen A. Arega, et al. "Clinicians' Perspectives on Racism and Black Women's Maternal Health." *Women's Health Reports* 3, no. 1 (May 1, 2022): 476–82. https://doi.org/10.1089/whr.2021.0148.

"Civil Rights Act (1964)." National Archives and Records Administration. Accessed May 8, 2024. https://www.archives.gov/milestone-documents/civil-rights-act.

Griggs v. Duke Power Company , n.d. https://www.oyez.org/cases/1970/124.

III, Ezelle Sanford. "Civil Rights and Healthcare: Remembering Simkins v. Cone (1963)." AAIHS, February 7, 2017. https://www.aaihs.org/civil-rights-and-healthcare-remembering-simkins-v-cone-1963/.

"The Immortal Life of Henrietta Lacks." Johns Hopkins Medicine. Accessed May 8, 2024. https://www.hopkinsmedicine.org/henrietta-lacks/immortal-life-of-henrietta-lacks#:~:text=Henrietta%20Lacks%20was%20one%20of,line%20able%20to%20reproduce%20indefinitely.

Jordan Crowley v. Strong Memorial Hospital of the University of Rochester; Kaleida Health; and UBMD Physician's Group (United States District Court Western District of New York October 1, 2021).

"Kidney Failure Risk Factor: Estimated Glomerular Filtration Rate (Egfr)." National Kidney Foundation, November 16, 2023. https://www.kidney.org/content/kidney-failure-risk-factor-estimated-glomerular-filtration-rate-

egfr#:~:text=The%20estimated%20glomerular%20filtration%20rate,%2C%20body%20size%2C%20and%20gender.

"Kidney Transplant." Mayo Clinic, March 28, 2024. https://www.mayoclinic.org/tests-procedures/kidney-transplant/about/pac-20384777.

Kolenich, Eric. "Richmond's Organ Transplantation Network Sued over Racial Equity Issue." Richmond Times-Dispatch, April 12, 2023. https://richmond.com/life-entertainment/health-med-fit/unos-organ-transplantation-network/article_cdbcbc24-d87c-11ed-8607-5ba6d8f4eeed.html#:~:text=A%20California%20man%20has%20filed,than%20people%20of%20other%20races.

"Lau v. Nichols (1974)." Oyez. Accessed May 20, 2024. https://www.oyez.org/cases/1973/72-6520.

Liverman, Catharyn T., Sarah Domnitz, and James F. Childress. *Opportunities for organ donor intervention research saving lives by improving the quality and quantity of organs for transplantation*. Washington, D.C: National Academies Press, 2018.

Majidi, Shideh, Osagie Ebekozien, Nudrat Noor, Sarah K. Lyons, Ryan McDonough, Kajal Gandhi, Roberto Izquierdo, et al. "Inequities in Health Outcomes in Children and Adults with Type 1 Diabetes: Data from the T1D Exchange Quality Improvement Collaborative." *Clinical Diabetes* 39, no. 3 (July 1, 2021): 278–83. https://doi.org/10.2337/cd21-0028.

"OPTN Policies Effective as of April 2, 2024 [Expedited ..." OPTN. Accessed May 9, 2024. https://optn.transplant.hrsa.gov/media/eavh5bf3/optn_policies.pdf.

"Physicians & the Health of the Community." AMA. Accessed May 9, 2024. https://code-medical-ethics.ama-assn.org/chapters/physicians-health-community.

"Public Health Service Study of Untreated Syphilis at Tuskegee and Macon County, al - Cdc - OS." Centers for Disease Control and Prevention, January 9, 2023. https://www.cdc.gov/tuskegee/index.html#:~:text=The%20U.S.%20Public%20Health%20Service%20(USPHS)%20Untreated%20Syphilis%20Study%20at,after%20it%20was%20widely%20available.

"Race and EGFR: What Is the Controversy?" National Kidney Foundation, December 6, 2021. https://www.kidney.org/atoz/content/race-and-egfr-what-controversy.

"Race, Ethnicity, & Kidney Disease." National Kidney Foundation, May 9, 2024. https://www.kidney.org/atoz/content/minorities-KD#:~:text=Black%20or%20African%20Americans%20are,the%20risk%20for%20kidney%20disease.

Removing the racial coefficient from calculations of EGFR. Accessed May 8, 2024. https://reports.mountsinai.org/article/neph2021-07-egfr-and-race.

Unosadmin. "National Organ Transplant Act Enacted 30 Years Ago." UNOS, June 17, 2021. https://unos.org/news/national-organ-transplant-act-enacted-30-years-ago/#:~:text=On%20October%2019%2C%201984%2C%20the,of%20other%20transplant%20networks%20worldwide.

Uppal, Prabhdeep, Benjamin L Golden, Ashley Panicker, Omar A Khan, and Matthew J Burday. "The Case Against Race-Based GFR." *Delaware Journal of Public Health* 8, no. 3 (August 31, 2022): 86–89. https://doi.org/10.32481/djph.2022.08.014.

Warren, Curtis, Anne-Marie Carpenter, Daniel Neal, Kenneth Andreoni, George Sarosi, and Ali Zarrinpar. "Racial Disparity in Liver Transplantation Listing." *Journal of the American College of Surgeons* 232, no. 4 (April 2021): 526–34. https://doi.org/10.1016/j.jamcollsurg.2020.12.021.

"Your Kidneys & How They Work - NIDDK." National Institute of Diabetes and Digestive and Kidney Diseases. Accessed May 8, 2024. https://www.niddk.nih.gov/health-information/kidney-disease/kidneys-how-they-work.