



HENRY FORD
TRANSPLANT INSTITUTE

Trans notes

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MACOMB COUNTY MAN RECEIVES ARTIFICIAL HEART AT HENRY FORD HOSPITAL

Johnnie Alexander, a 56-year-old Macomb County man, became the first successful recipient of an artificial heart at Henry Ford Hospital. “We literally pulled him from death’s grip,” said Henry Ford Hospital cardiothoracic surgeon Hassan Nemeh, M.D., who performed the procedure.

The man suffered from cardiac sarcoidosis, a disease that infiltrates organs of the body and causes abnormal inflammation and malfunction. Diagnosed with the condition more than three years ago, the patient eventually suffered cardiomyopathy in both sides of his heart.

Doctors were able to manage the condition with medication, and the patient was placed on the transplant list in September 2017. But just after Thanksgiving 2017, Alexander’s heart started to fail despite treatments.

His Henry Ford Hospital medical team inserted an intra-aortic balloon pump, then a temporary left ventricular assist device – or temporary LVAD – to help his heart keep pumping. Both initially helped keep him alive. But then doctors discovered his heart was again malfunctioning despite the interventions.

The surgical team, led by Dr. Nemeh, removed the patient’s native ventricles and implanted the SynCardia artificial heart on Dec. 11, 2017. The heart’s

mechanisms are contained in an 18-pound pack that stays with the patient.

Henry Ford Hospital’s multi-disciplinary Heart Failure Team determined the FDA-approved artificial heart was the only option left. The SynCardia Total Artificial Heart, which has been in use for more than 32 years, replaces both failing heart ventricles and the four heart valves. Data published in the *New England Journal of Medicine* from the 10-year pivotal clinical study led to FDA-approval; 79 percent of patients who received the Total Artificial Heart were bridged to transplant. The longest a patient has been supported by the SynCardia Total Artificial Heart is more than four years.

Alexander and his wife agreed that he wanted to proceed. He received the artificial heart in a five-hour procedure that included a team of about a dozen medical professionals from the Henry Ford Heart & Vascular Institute and the Henry Ford Transplant Institute.

“The operation went smoothly,” Dr. Nemeh said. “Due to the advanced level of illness, he progressed very slowly. But his general condition is much, much better and we are grateful we were able to help him with this advanced technology.”

Pastor Alexander, who is also a retired law enforcement officer, returned to his church



Hassan W. Nemeh, M.D.



Hassan W. Nemeh, M.D.

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From The Editor

Welcome to the Fall 2019 issue of *TransNotes*, a newsletter produced by the Henry Ford Transplant Institute. Our purpose for producing this publication is to share our research and advances in the field of transplantation with our colleagues.



Marwan S. Abouljoud, M.D., FACS

Moving into our 51st year, innovations in organ transplantation continue to advance at Henry Ford Hospital. Henry Ford Hospital Cardiothoracic Surgeon Hassan Nemeh, M.D., successfully implanted the SynCardia artificial heart on a 56-year-old Macomb County man, the only option left for this patient.

We are also pleased to share growth in our VAD program which has surpassed national one-year survival rates. Jennifer Cowger, M.D., medical director of mechanical circulatory support, leads the VAD program.

The Center for Living Donation is also working diligently to educate and recruit potential kidney and liver organ donations. With the work of Maria Zanini, clinical manager, the Center has been able to reduce wait times from as long as five years to one to two months with living donations.

Our team presented several oral and poster presentations at the American Transplant Congress last summer. Shunji Nagai, M.D., director, transplant surgery research, led many of the studies. We share these and others in this publication, as well as abstracts of recently published research articles.

Inserted in this edition of *TransNotes* is a special edition of *Where Miracles Happen*. Presented are the most recent data showing our excellent clinical outcomes for each organ transplanted. We are always pleased to achieve these results, but continue to strive to advance care on behalf of our patients.

I hope you find these and the other articles informative and thought-provoking and perhaps valuable in your own research or practice. As always, referring physicians should feel free to contact us at our toll-free number, 1-855-85-TRANSPLANT, or to contact me directly at (313) 916-2941, for your patient or practice needs.

Marwan S. Abouljoud, M.D., FACS
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MACOMB COUNTY MAN RECEIVES ARTIFICIAL HEART

continued from cover

on March 18, 2018 and discussed the procedure and his wait for a heart transplant.

Alexander spent months in the hospital and gained possibly 10-years to his life expectation. He's not wasting time, Alexander is going back to school to get a doctorate in theology and is contemplating a physical therapy assistant program, too! "If we can save a life, I think we have done a great job and a great justice to humanity," he said. Alexander acknowledges his donor's sacrifice and giving him life through the heart donation, and a kidney to resolve his kidney disease.

Henry Ford Health System is one of only three programs in the State of Michigan which provides comprehensive surgical therapy for the treatment of advanced heart failure, including heart transplant, LVAD and the artificial heart.

"Henry Ford Health System is proud to add the artificial heart as an option for our patients," said Henry Kim, M.D., head of the Edith and Benson Ford Heart & Vascular Institute at Henry Ford Hospital. "It aligns perfectly with our emphasis on offering advanced treatments for all aspects of heart disease."

To refer a heart failure patient or for more information, please call 1-877-434-7470.

DIRECTOR ABLOUJOD NAMED PRESIDENT-ELECT OF AMERICAN SOCIETY OF TRANSPLANT SURGEONS

During the 2019 American Transplant Congress in Boston, Marwan Abouljoud, M.D., FACS, director of the Henry Ford Transplant Institute was elected by his peers as President-elect of the American Society of Transplant Surgeons. He will officially assume the role of President of the organization during the 2020 Congress in Philadelphia. "I am honored to be chosen, particularly by my colleagues, to lead this esteemed group," said Dr. Abouljoud.

The Arlington, Virginia-based society represents approximately 1,800 surgeons and advances transplantation through excellence in patient care, research, education and advocacy. "I hope to continue the tradition of providing transplant surgeons the utmost support now and in the future," said Dr. Abouljoud.

During his tenure, Dr. Abouljoud hopes to focus on surgeon assessment and certification process, increasing diversity in the workforce, and creating an effective wellness and resilience program.



EFFECTS OF ALLOCATING LIVERS FOR TRANSPLANTATION BASED ON END-STAGE LIVER DISEASE MODEL (MELD) – SODIUM SCORES ON PATIENT OUTCOMES

In January 2016, the Organ Procurement and Transplantation Network/United Network for Organ Sharing (OPTN/UNOS), introduced the Model for End-stage Liver Disease and Sodium (MELD-Na) score for liver allocation. The effect of liver allocation based upon MELD-Na score for patients on waitlist (90-day investigation) and post-transplantation outcomes (1-year graft survival) was evaluated.

Since 2002, the Model for End-stage Liver Disease (MELD) score had been previously used for allocation of deceased donor liver grafts in the U.S. The MELD score was used to predict mortality in patients with liver cirrhosis and it prioritized patients for liver transplantation (LT). However, hyponatremia, an independent prognostic factor in patients with cirrhosis, was not included in the original MELD score calculation. A proposed scoring system was introduced to further decrease patient waitlist mortality within a 90-day investigation by incorporating serum sodium concentration into the MELD equation (MELD-Na) and was officially implemented for liver allocation in 2016.

Two qualifying adult patient groups (≥ 18 years old) using retrospective data from the OPTN/UNOS registry were examined; the MELD-period group composed of patients who were registered as transplant candidates from June 18, 2013 through January 10, 2016 ($n = 18,850$) and the MELD-Na period group composed of patients who were registered from January 11, 2016 through September 30, 2017 ($n = 14,512$). Waitlist and post-transplantation outcomes and association with serum sodium concentrations between both groups was studied and compared.

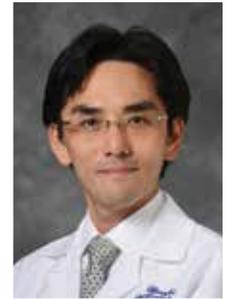
The results of the study showed mortality within 90 days on the liver waitlist decreased (hazard ratio [HR] 0.738, $P < .001$) and transplantation probability increased significantly (HR 1.217, $P < .001$) in the MELD-Na period. Although mild, moderate, and severe hyponatremia (130–134, 125–129, and <125 mmol/L) were independent risk factors for waitlist mortality in the MELD period (HR 1.354, 1.762, and 2.656; $P < .001$, $P < .001$, and $P < .001$, respectively) compared with the reference standard (135–145 mmol/L), these adverse outcomes were decreased in the MELD-Na period (HR 1.092, 1.271 and 1.374; $P = .27$, $P = .018$, and $P = .037$, respectively).

The adjusted survival benefit of transplant recipients vs. patients placed on the waitlist in the same score categories was definitive for patients with MELD-Na scores of 21–23 in the MELD-Na era (HR 0.336, $P < .001$) compared with MELD scores of 15–17 in the MELD era (HR 0.365, $P < .001$).

According to Shunji Nagai, M.D., Ph.D., director, transplant surgery research, the results of this study indicate, “MELD-Na score-based allocation significantly decreased LT waitlist mortality. Hyponatremia was no longer a risk factor for waitlist mortality and survival benefit of liver transplant has successfully improved higher scores and waitlist outcomes.”

Nagai S*, Chau LC*, Schilke RE, Safwan M, Rizzari M, Collins K, Yoshida A, Abouljoud MS, Moonka D. Effects of Allocating Livers for Transplantation Based on Model for End-Stage Liver Disease–Sodium Scores on Patient Outcomes. *Gastroenterology*. 2018 Nov;155(5):1451–1462.e3. doi: 10.1053/j.gastro.2018.07.025. www.ncbi.nlm.nih.gov/pubmed/30056096 Epub 2018 Jul 26.

**Shared authorship.*

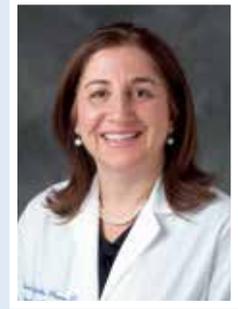


*Shunji Nagai, M.D., Ph.D.
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Shunji Nagai, M.D., Ph.D.

DECREASED LONG-TERM SURVIVAL WITH ANTITHYMOCYTE GLOBULIN INDUCTION IN ELDERLY KIDNEY TRANSPLANT RECIPIENTS



Iman Francis,
Pharm.D., Director,
Transplant Research
Operations

To better understand the long-term consequences of immunosuppression on the elderly, members of the Henry Ford Transplant Institute performed a single-center retrospective analysis. The results were presented at the American Transplant Congress in June 2018.

In this analysis long-term outcomes for younger (Y) versus elderly (E) kidney transplant recipients (KTR) were compared using the medical records of 318 Henry Ford Hospital KTR from 2003 to 2010 to review for mycophenolate, tacrolimus, and steroid regimens. The recipients received antithymocyte globulin (Thy: 4.5mg/kg), basiliximab (Sim: 20mg x2), or had no induction based on immunological risk.

The recipients were divided into two cohorts: Y: ≤59 years-old; n=172; and E: ≥65 years-old; n=146. Those aged 60-64 were excluded to distinguish groups. Graft and patient survival were demonstrated by Kaplan-Meier plots and reliability was tested using a multivariate Cox proportional-hazards model and log-rank test, controlled for induction, type of transplant, gender, and race. Death events were plotted along the follow-up period by cause of death.

The results indicated no statistical difference between groups' baseline characteristics, induction therapy, graft failure, or median follow up days [Y, 2132 (1770, 2729);

E, 2048 (1540, 2538); P > 0.05]. The younger cohort had better survival than the elderly cohort (P < 0.001), especially those who received Thy (P < 0.001). In the Cox proportional-hazards model, risk of mortality increased with age [2.169 (1.287, 3.656), P = 0.004].

No difference in mortality was observed for Sim or no induction (P > 0.05). When stratified by cause of death, cancer and infection tended to occur early, within the first five years of transplant. Cardiovascular events were more evenly distributed during the long-term follow up.

According to Iman Francis, director of Transplant Research Operations, "Despite similar long-term graft survival, patient survival significantly decreased among the elderly patients. Mortality is strongly correlated with patients who received Thy. These findings suggest a survival benefit with less severe immunosuppressive regimen, particularly induction therapy among the elderly."

Francis I, Yaldo A, Crombez C, Abouljoud M. Decreased Long-Term Survival with Antithymocyte Globulin Induction in Elderly Kidney Transplant Recipients. *Am J Transplant.* 2018;18 (suppl 4).

OUR VISION

We are passionate advocates for our patients and families, and we will innovate and advance to achieve clinical breakthroughs, outstanding care and better quality of life in an environment of compassion and hope.

Transplant Program	Total Program Transplants Through 2018	First Transplant
Liver Transplant (Total)	1959	1989
<i>Living-Donor Transplant</i>	114	2000
<i>Deceased-Donor Liver Transplant</i>	1845	1989
Kidney Transplant (Total)	3463	1968
<i>Living-Donor Transplant</i>	1189	1968
<i>Deceased-Donor Transplant</i>	2274	1968
Lung Transplant	301	1994
Heart Transplant	539	1985
Pancreas Transplant	165	1987
Bone Marrow Stem Cell Transplant	1334	1988
Intestine/Multivisceral Transplant	34	2010
Ventricular Assist Devices Implanted	553	1993

CENTER FOR LIVING DONATION

The American Transplant Foundation estimates there are more than 108,000 patients waiting for a kidney or liver transplant in the United States. Some won't make it to the end of the day.

The wait time for an organ in Michigan can be as long as five years. At Henry Ford, living donor recipients wait as little as one to two months. Every living donor shortens the waitlist and saves lives.

As the largest center in Michigan for adult-to-adult living-donor liver transplants, the Henry Ford Center for Living Donation (CLD) remains at the forefront of living donations for kidney and liver transplantation. Its team also pioneered minimally invasive and robotic kidney procurement and paired kidney exchanges.

Always innovating, major firsts of the Transplant Team include:

- First in Michigan to perform an adult-to-adult living-donor liver transplant
- First in Michigan to perform a laparoscopic living-donor liver transplant
- First in Michigan to perform a cross-racial living-donor kidney transplant
- First in Michigan to offer robot-assisted recipient kidney transplant surgery
- Pioneers of laparoscopic and robot-assisted living-donor kidney procurement

In 2018, there were 51 living kidney donations and seven living liver donations. Those donations have many benefits for the organ recipient. For example, the procedure can be

scheduled much earlier rather than waiting for a deceased donor, this means the recipient is much healthier. This also reduces negative effects on the rest of the body. A living donation typically lasts longer and works immediately.

To help living donors, the Center for Living Donation team helps to navigate the living donation process and educate the donors. Maria Zanini, MSN, ACNP-BC, clinical manager for the Center for Living Donation explains, "We educate donors to understand what is involved and just how quickly they can get back to living their lives."

Zanini is leading the development of a pre-op mentorship program for liver and kidney donors. This program brings former living donors along-side potential donors to explain what to expect throughout the process. "The donor mentors are specially trained by our staff to provide support and share their donor experience," said Zanini.

"Not everyone can be a donor, but everyone can be a champion," shared Zanini. Another program in development is the Champion program. Zanini hopes to spread the word about the urgent need and importance of living liver and kidney donation with the help of Champions. Most recently, more than 90 people applied to become living donors for an individual waiting on the list, due to a social media request and stories shared. "We would like to have as many Champions as possible, using social media to spread the importance of living organ donation is one important venue to spread the word."

To learn more about the Henry Ford Center for Living Donation, log on to www.henryford.com/livingdonation.

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CHRONIC NARCOTIC USE INCREASES MORTALITY RATES IN HEART TRANSPLANTATION

In kidney and liver transplantation the use of chronic narcotics in pre- and post-transplant has been associated with an increased risk for rejection and early graft loss. However, less was known on the adverse clinical outcomes associated with chronic narcotic use in heart transplant (HT) recipients. For this reason, a retrospective chart review of adults who underwent HT at Henry Ford Hospital between January 1, 2007 to June 30, 2016 was performed.

Patients were stratified into groups by narcotic use. Chronic narcotic use (CNU) was defined as positive or negative for CNU at six months pre-transplant and six months post-transplant. Univariate two-group comparisons were carried out using independent two-group t-tests for continuous variables, and chi square tests for categorical variables. Survival distributions were compared between groups using log-rank tests.

The results of this review indicated 115 patients underwent HT; 81 percent were male, mean age 53.8 ± 11 years, 48 percent white and 43 percent black. Among the patients, CNU was noted pre-transplant (N=26) had more illicit drug use (58 percent vs. 28 percent P = .005), psychiatric history (77 percent vs. 49 percent P = .013) and criminal history (38 percent vs. 16 percent P = .012) than those without narcotic use pre-transplant. Patients with CNU post-transplant (N=32) had more illicit drug use (50 percent vs. 29 percent P = .033), psychiatric history (75 percent

vs. 48 percent P = .010) and criminal history (38 percent vs. 14 percent P = .006) than those without narcotic use post-transplant.

No differences were observed in the rate of rejection amongst the groups. The median survival time in months along with 1-, 3-, and 5-year survival probabilities with their standard errors of both groups is represented below. The 1-, 3- and 5-year survival is worse in patients with CNU post-transplant.

Ginger St. John, MSW, Heart Transplant social worker at Henry Ford Hospital, explains the results of the review, “Patients without chronic narcotic use post-transplant have higher survival probabilities at each of the three time points than those with chronic narcotic use post-transplant.” She notes however, “Additional studies are warranted to confirm observed associations.”

St. John G, Chamogeorgakis T, Neme H, Tita C, Selektor Y, Lanfear D, Williams C. Chronic Narcotic Use Increases Mortality Rates in Heart Transplantation. *Am J Transplant.* 2018;18 (suppl 4).



Ginger St. John, MSW

SURVIVAL BY NARCOTICS

Variable	Median survival time in months (95% CI)	1-year survival probability (SE)	3-year survival probability (SE)	5-year survival probability (SE)	P value
No narcotics pre transplant	119.6 (109.6, N/A)	0.898 (0.03)	0.835 (0.041)	0.835 (0.041)	0.098
Narcotics pre transplant	N/A (20.5, N/A)	0.769 (0.08)	0.690 (0.09)	0.690 (0.09)	
No narcotics post transplant	119.6 (109.6, N/A)	0.916 (0.03)	0.887 (0.04)	0.887 (0.04)	0.002
Narcotics post transplant	N/A (19.2, N/A)	0.750 (0.08)	0.625 (0.09)	0.590 (0.09)	

INCREASED RISK OF DEATH IN FIRST YEAR AFTER LIVER TRANSPLANTATION AMONG PATIENTS WITH NONALCOHOLIC STEATOHEPATITIS VS. LIVER DISEASE OF OTHER ETIOLOGIES

A retrospective study that compared liver transplant (LT) outcomes between patients with hepatitis C (HCV) to those patients with non-alcoholic steatophepatitis (NASH) was a poster presentation at the 2018 American Transplant Congress.

Henry Ford Hospital transplant and hepatobiliary surgeons and gastroenterologists explained the purpose of the study was to determine if LT recipients with NASH are more at risk for medical comorbidities associated with worse outcomes after LT. The risk factors studied were older age, obesity, and diabetes among patients with HCV and NASH using propensity score-matching (PSM).

Retrospective data of LT recipients (≥ 18 years old) from the UNOS registry between 2008 to 2017 were analyzed. The recipients were divided into four Era groups (Era 1: 2008-2010, Era 2: 2011-2013, Era 3: 2014-2015, Era 4: 2016-2017). Clinically significant donor and recipient characteristics were balanced by PSM between the HCV and NASH groups in each Era, except for the recipient's age, body mass index, and history of diabetes (NASH associated characteristics). The hazard of graft failure between the HCV and NASH groups were compared using multivariable Cox regression models.

A total of 18,970 patients with HCV and 5,899 patients with NASH underwent LT. Patients with NASH had significantly older recipient age (59.4 vs. 57.2 years, $P < 0.001$), higher BMI (28.3 vs. 27.6, $P < 0.001$), and higher prevalence of diabetes (58.8 percent vs. 23.9 percent, $P < 0.001$). Age in the NASH group continued to increase, and the trend was significant (58.8, 59.1, 59.5, and 60.2 years in Eras 1, 2, 3 and 4, respectively, $P < 0.001$). PSM confirmed balance of characteristics, except for the NASH associated characteristics. The NASH group showed worse graft survival in all four Eras. PSM hazards of graft failure among NASH patients in Eras 1, 2, 3, and 4 were 1.235, 1.23, 1.35, and 1.479 times those with HCV ($P=0.009$, 0.025, 0.006, and 0.009, respectively).

Dilip Moonka, M.D., medical director, Liver Transplant Program explains the results of this study indicate "The PSM risk of graft failure was significantly higher in NASH patients than in those with HCV throughout the study period."

Shunji Nagai, M.D., Ph.D., director, transplant surgery research adds, "This study exposed hidden risks with LT for NASH which were underestimated in the past. These results suggest important implications for risk stratification in an era of shifting indications for LT."

Nagai S, Collins K, Chau LC, Safwan M, Rizzari M, Yoshida A, Abouljoud M, Moonka D. Increased Risk of Death In First Year After Liver Transplantation among Patients with Nonalcoholic Steatohepatitis vs. Liver Disease of Other Etiologies. *Clinical Gastroenterology and Hepatology*. Ap. 17, 2019; Volume 0, Issue 0. doi: <https://doi.org/10.1016/j.cgh.2019.04.033>.



*Dilip Moonka, M.D.
Medical Director, Liver
Transplant Program*



*Shunji Nagai, M.D., Ph.D.
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Surgery Research*

MULTIVARIATE COX PROPORTIONAL HAZARDS MODEL FOR ESTIMATING LONG-TERM RISK OF AGING KIDNEY TRANSPLANT RECIPIENTS

The growing number of elderly kidney transplant recipients (KTR) presented an opportunity for the Henry Ford Hospital kidney transplant team to analyze and predict long-term outcomes and risk in this aging population. The team presented the findings on the long-term outcomes of aging kidney transplant recipients in a poster presentation at the American Transplant Congress in June 2018.

As a single-center retrospective analysis, the medical records of KTR from 2003–2010 were included. The study included recipients aged 40 to 79 years and on an immunosuppressive regimen of mycophenolate, tacrolimus, and steroids. Baseline variables including age, induction therapy, type of transplant, gender, and race were included in the multivariate Cox proportional hazards (PH) model for mortality, biopsy-proven acute rejection (BPAR), and graft failure (GF).

Linear combination of model predictors weighted by regression coefficients in Cox PH model were used as a risk score for events. An optimal cut-off point was selected to classify patients into low vs. high groups whereby the log-rank test statistic contrasting the groups were maximized. Kaplan–Meier (KM) curves and the log-rank test were used to assess the survival profiles.

There were 318 KTR with a median follow-up of 2120 days. Older age was associated with increased hazard ratio (HR) for mortality [1.04 (1.01, 1.06), $P = 0.003$] and decreased HR for BPAR [0.96 (0.94, 0.98), $P < 0.001$], but was not associated with GF. KM plots revealed low and high-risk groups defined by fitted Cox PH models that had significant separation ($P < 0.001$) for survival and BPAR. Other findings were increased HR for BPAR for recipients of living unrelated donors [2.23 (1.04, 4.82), $P = 0.04$] vs. living related donors as well as African Americans [1.79 (1.11, 2.92), $P = 0.02$] vs. Caucasians. Females experienced decreased HR [0.52 (0.33, 0.83), $P = 0.01$] vs. males for BPAR.

“The predictive model informs clinicians of the risks of transplanting an aging population,” explains Alexander Yaldo, research specialist. “For every year that age increases, kidney transplant recipients have a lower risk of experiencing biopsy-proven acute rejection but have a greater risk of mortality.”

Yaldo A, Bajjoka I, Han X, Crombez C, Abouljoud M. Multivariate Cox Proportional Hazards Model for Estimating Long-Term Risk of Aging Kidney Transplant Recipients. *Am J Transplant.* 2018;18 (suppl 4).

TRANSPLANT LECTURE SERIES

The Henry Ford Transplant Institute hosts a series of monthly educational lectures. Come hear our expert physicians, surgeons and visiting professors speak on groundbreaking transplant topics.

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www.HenryFord.com/TransplantTalk

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- **December 9, 2019:**
Lecture by Dr. Sara Hegab, HFH Pulmonary and Critical Care Medicine
- **April 13, 2020:**
Lecture by Dr. Warren Kupin

LIVER ALONE OR SIMULTANEOUS LIVER-KIDNEY TRANSPLANT?

PRE-TRANSPLANT CHRONIC KIDNEY DISEASE AND POST-TRANSPLANT OUTCOME - A RETROSPECTIVE STUDY

When the Organ Procurement and Transplant Network/United Organ Sharing Network (OPTN/UNOS) implemented the new simultaneous liver-kidney transplant (SLK) policy, members of the Henry Ford Transplant team began a single-site retrospective study to investigate the impact of the policy on pre-transplant chronic kidney disease (CKD) on liver transplant outcomes of SLK versus LTA alone, utilizing the new SLK policy.

The new policy requires that the allocation of a kidney is dependent on either the duration of the low glomerular filtration rate (GFR) or CKD criteria: GFR < 60 ml/min for > 90 consecutive days and 30 < ml/min at registration, or a sustained acute kidney injury (AKI criteria), or metabolic disease. The new policy also includes a “safety net” in the post-transplant period for recipients of LTA, giving additional priority for offers of kidney alone in patients where kidney function does not recover post-LTA.

The medical records of Henry Ford Hospital patients with LTA and SLK between 2009 and 2015 were reviewed. Patients who received primary deceased donor LT for either LTA or SLK were included; patients who underwent living donor liver transplant or liver transplant were excluded.

From the series, 535 patients were eligible. The LTA-CKD group (n=27) showed worse one-year graft survival, compared with SLK group (n=44), but not significant (81 percent vs. 93 percent, P = 0.15). The LTA-CKD

group significantly increased in risk of post-transplant dialysis (odds ratio = 5.50 [95 percent CI = 1.27-24.7], P = 0.02 [Ref. normal kidney function]).

Post-transplant dialysis was an independent risk factor for graft loss (hazard ratio = 7.25, 95 percent CI = 3.3-15.91, P < 0.001 [Ref. SLK]).

To validate the findings, the OPTN/UNOS transplant registry was used. The hazard of one-year-graft loss in the LTA-CKD group (n = 751) was 34.8 percent higher than the SLK group (n=2856) (hazard ratio = 1.348, 95 percent CI = 1.157-1.572, P < 0.001).

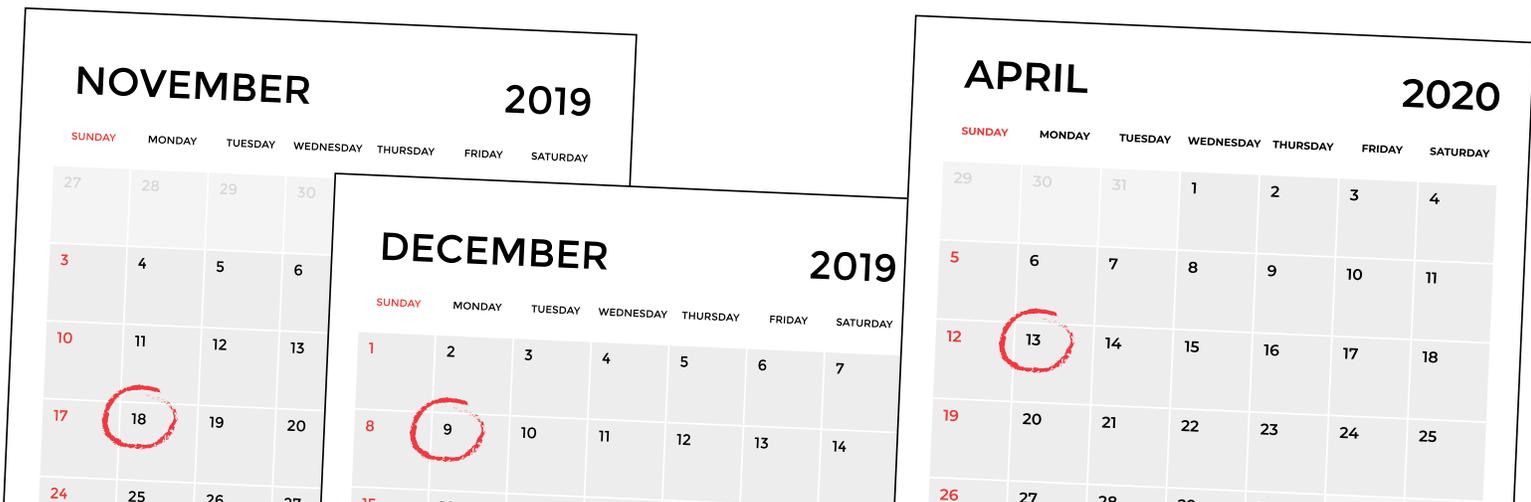
Shunji Nagi, M.D., director, transplant surgery research, explains, “The results indicate that SLK for patients who met the CKD criteria may have significantly improved transplant outcomes, which was validated by the analysis of the OPTN/UNOS registry. It would be worthwhile for transplant centers take these findings into account, when considering expansion of their SLK criteria.”

Nagai S, Safwan M, Collins K, Schilke R, Rizzari M, Moonka D, Brown K, Patel A, Yoshida A, Abouljoud M. Liver alone or simultaneous liver-kidney transplant? Pretransplant chronic kidney disease and post-transplant outcome – a retrospective study. *Transplant International*. 2018;1028 doi:10.1 111/tri.13275

Preliminary results were presented in 2017 American Transplant Congress, Chicago, IL, USA



Shunji Nagai, M.D., Ph.D.
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MEET THE HENRY FORD TRANSPLANT TEAM...

ABDOMINAL TRANSPLANT SURGEONS

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Heart: (313) 916-2895

Stem Cell: (313) 916-5002

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HENRY FORD TRANSPLANT INSTITUTE OUTREACH CLINICS

In addition to the transplant clinics at Henry Ford Hospital in Detroit, 22 convenient outreach clinics are located throughout Michigan. Please contact Michelle "Cookie" Crossley, R.N., at (248) 219-2326 or Christina Somers, R.N., at (313) 622-4352 for more information.

HEART

Advanced Heart Failure Clinic
Henry Ford Macomb Hospital
15855 19 Mile Road
Clinton Township, MI 48038

Advanced Heart Failure Clinic
Henry Ford West Bloomfield Hospital
6777 W. Maple Road
West Bloomfield, MI 48322

Advanced Heart Failure Clinic
Providence Hospital
22250 Providence Dr., Suite 705
Southfield, MI 48075

Advanced Heart Failure Clinic
St. John Hospital and Medical Center
22201 Moross Road, Suite 356
Detroit, MI 48236

Advanced Heart Failure Clinic
Ernst Cardiovascular Center
Beaumont Hospital
3601 W. 13 Mile Road
Royal Oak, MI 48073

LUNG

Grand Blanc Lung Clinic
8220 S. Saginaw St., Suite 800
Grand Blanc, MI 48439

Macomb Lung Clinic
50505 Schoenherr Dr., Suite 290
Shelby Twp., MI 48315

Novi Lung Clinic
Henry Ford Medical Center – Columbus
39450 W. 12 Mile Road
Novi, MI 48377

KIDNEY AND PANCREAS

Lansing Kidney and Pancreas Clinic
1200 East Michigan Avenue, Suite 700
Lansing, MI 48912

Pontiac Kidney and Pancreas Clinic
44200 Woodward Ave., Suite 109
Pontiac, MI 48341

Lakeside Kidney and Pancreas Clinic
Henry Ford Medical Center – Lakeside
14500 Hall Rd.
Sterling Heights, MI 48313

Novi Kidney and Pancreas Clinic
Henry Ford Medical Center – Columbus
39450 W. 12 Mile Road
Novi, MI 48377

Hurley Kidney and Pancreas Clinic
One Hurley Plaza, 5 West
Flint, MI 48503

Ypsilanti Kidney and Pancreas Clinic
Reichert Building, Suite 403
5333 McAuley Drive
Ypsilanti, MI 48197

West Branch Kidney and Pancreas Clinic*
648 Progress Street, Suite 101
West Branch, MI 48661

Bay City Kidney and Pancreas Clinic
Great Lakes Bay Health Center*
3884 Monitor Road
Bay City, MI 48706

LIVER, INTESTINAL, AND MULTIVISCERAL

Liver, Intestinal and Multivisceral
Transplant Clinic – Flint
6240 Rashell, Suite 204
Flint, MI 48507

Liver, Intestinal and Multivisceral
Transplant Clinic – Grand Blanc
600 Health Park Blvd., Suite D
Grand Blanc, MI 48439

Liver Transplant Center
Henry Ford Medical Center – Columbus
39450 W. 12 Mile Road
Novi, MI 48377

Liver, Intestinal and Multivisceral
Transplant Clinic
Michigan Gastroenterology Institute
1650 Ramblewood Dr.
East Lansing, MI 48223

Liver, Intestinal and Multivisceral
Transplant Clinic – Saginaw
4690 McLeod Drive East
Saginaw, MI 48604

Liver, Intestinal and Multivisceral
Transplant Clinic
Spectrum Health
4100 Lake Drive
Grand Rapids, MI 43522

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To improve and extend life by meeting the needs of transplant patients and their families with compassionate, innovative and personalized quality care.

JUST A CLICK AWAY

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- Speakers bureau
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