Supplemental Table S1a-b. Full donor and recipient inclusion and exclusion criteria for trial of HCV-viremic kidney transplantation into HCV uninfected recipients.

Supplemental Table S1a. Donor inclusion and exclusion criteria.

Donor Inclusion criteria	Donor Exclusion criteria
1. Detectable HCV RNA, with genotype 1 or 4 2. KDPI score ≤ 65%	1. Known prior HCV treatment with direct-acting antiviral agent 2. Confirmed HIV 3. Confirmed HBV (surface antigen or HBV DNA) 4. Significant liver disease or signs of liver decompensation (splenomegaly, ascites) noted during recovery (advanced fibrosis, cirrhosis) 5. Any standard contra-indication to donation noted in donor (significant malignancy, unusual infection)

Supplemental Table S1a. Donor eligibility criteria. Abbreviations: HCV = Hepatitis C virus; RNA = ribonucleic acid; KDPI = kidney donor profile index; HIV = human immunodeficiency virus; HBV = Hepatitis B virus.

Supplemental Table S1b. Recipient inclusion and exclusion criteria.

Recipient Inclusion criteria	Recipient Exclusion criteria
1. Age 40-70 years old 2. Met MGH transplant center criteria and already listed for isolated kidney transplant 3. No available living kidney donor 4. Has ≤ 730 days (2 years) of accrued transplant waiting time if blood type A and ≤ 1095 days of accrued transplant waiting time if blood type B or O 5. On chronic hemodialysis or peritoneal dialysis or has glomerular filtration rate < 15 mL/min/1.73m^2 at time of screening 6. Women must agree to birth control in accordance with Mycophenolate Risk Evaluation and Mitigation Strategy and at least one other barrier method 7. Weigh at least 50 kg 8. Serum ALT within normal limits with no history of liver disease 9. Able to sign informed consent	1. AB blood type 2. BMI > 35 3. Pregnant or lactating women 4. Known allergy or intolerance to tacrolimus that would require administration of cyclosporine rather than tacrolimus 5. Cardiomyopathy (LV ejection fraction < 50%) 6. Albumin < 3 g/dl or platelet count < 5 x 10^3/mL 7. Positive crossmatch or positive donor specific antibodies 8. HIV positive (antibody or RNA) 9. HCV RNA positive 10. Hepatitis B surface antigen positive 11. Any known liver disease or elevated liver transaminases 12. Primary focal segmental glomerulosclerosis (FSGS), FSGS recurring after previous transplant or disease process with increased risk of causing early graft failure as assessed by

	transplant nephrologist or investigator team 13. Any contra-indication to kidney transplantation per our center protocol

Supplemental Table S1b. Recipient eligibility criteria. Abbreviations: HCV = Hepatitis C virus; RNA = ribonucleic acid; KDPI = kidney donor profile index; HIV = human immunodeficiency virus; HBV = Hepatitis B virus; BMI = body mass index; MGH = Massachusetts General Hospital.

Supplemental Table S2. Massachusetts General Hospital standard of care protocols for screening and prophylaxis of post-transplant viral infections

Virus	Screening / Prophylaxis
BK virus (BKV)	Screened monthly for first 6 months post-transplant. Screened every other month from 6 months post-transplant to 24 months post-transplant.
Cytomegalovirus (CMV)	If both donor and recipient are negative for CMV, famciclovir 500 mg daily is given for 3 months with dose reductions as needed per eGFR. If donor is positive and recipient is negative, valganciclovir 900 mg daily is given for 6 months with dose reductions as needed per eGFR. If recipient is positive, valganciclovir 900 mg daily is given for 3 months with dose reductions as needed per eGFR.

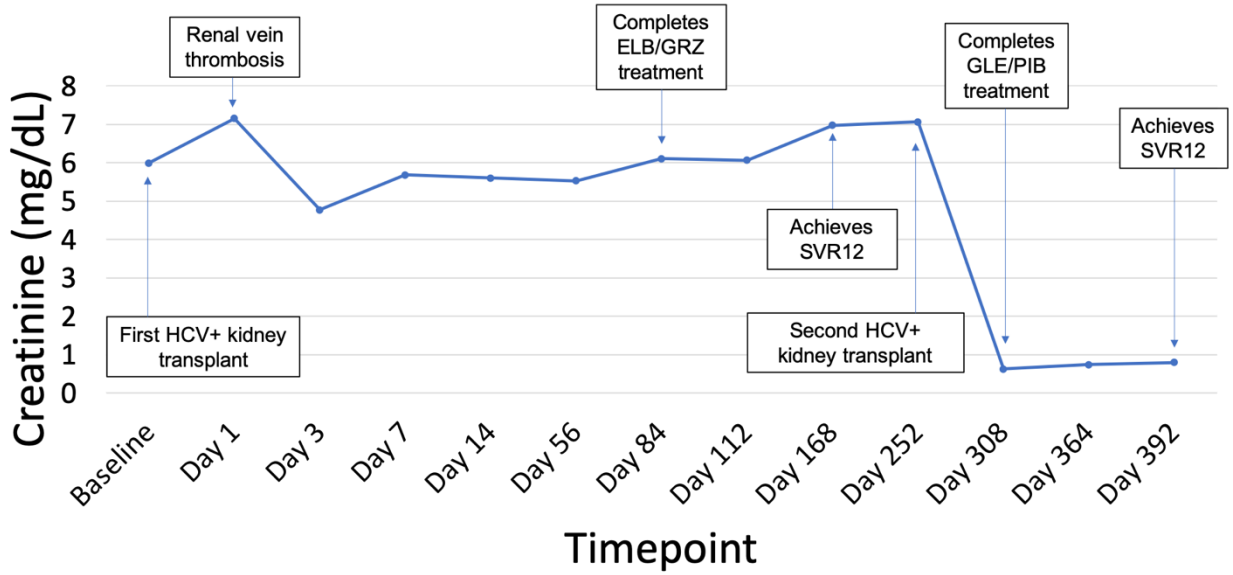
Supplemental Table S2. Massachusetts General Hospital standard of care protocols for screening and prophylaxis of post-transplant viral infections. eGFR = estimated glomerular filtration rate.

Supplemental Table S3. Baseline characteristics of excluded subjects

	Excluded subjects (n=10)
Age at time of consent (mean (SD))	55.8 (6.7)
Female (n (%))	3 (30)
Race/ethnicity (n (%))	
White, not Hispanic	6 (60)
Hispanic	2 (20)
Black	2 (20)
ESRD cause (n (%))	
Diabetes/hypertension	7 (70)
Polycystic kidney disease	1 (10)
Wegener's	1 (10)
Secondary FSGS	1 (10)
Blood type (n (%))	
A	4 (40)
O	5 (50)
B	1 (10)
Prior transplant (n (%))	2 (20)
BMI (med (IQR))	28.0 (26.0-31.9)
History of Diabetes (n (%))	4 (40)
Days on waitlist prior to consent (med (IQR))	405 (195.25-638.5)

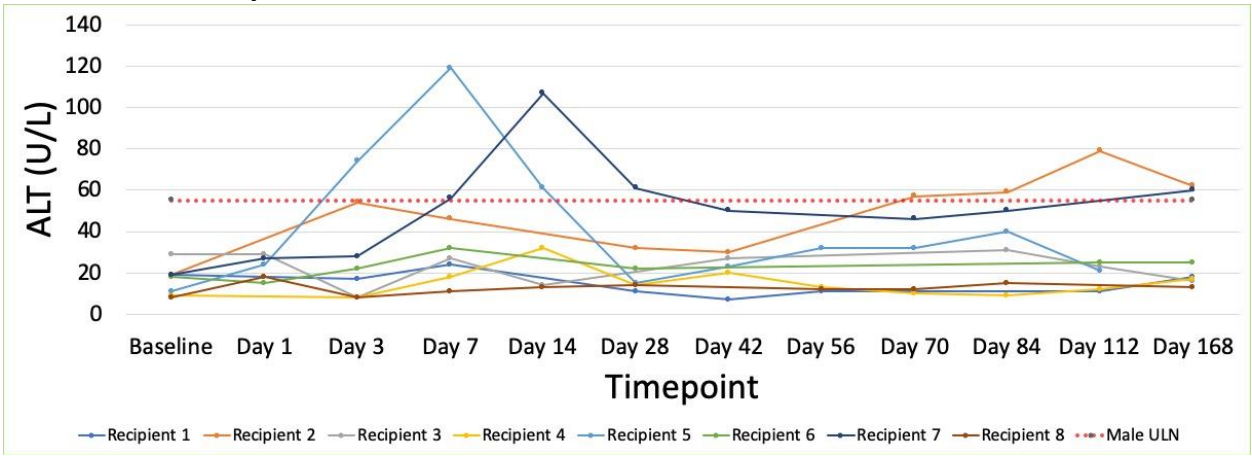
Supplemental Table S3. Baseline characteristics of excluded subjects. HCV = Hepatitis C virus; SD = standard deviation; IQR = interquartile range; ESRD = end-stage renal disease; GPA = granulomatosis with polyangiitis; FSGS = focal segmental glomerulosclerosis; BMI = body mass index.

Supplemental Figure S1. Clinical course of the recipient with immediate graft failure



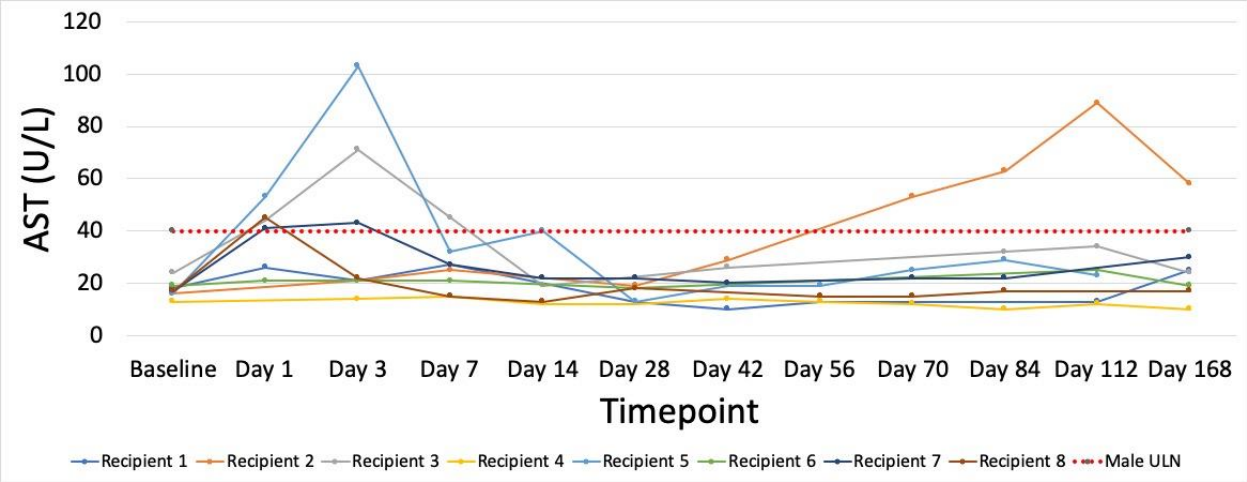
Supplemental Figure S1. The patient who experienced immediate graft failure was subsequently re-transplanted from a donor with genotype 1a infection and began pre-emptive glecaprevir and pibrentasvir “on-call” to the operating room. An eight-week course of glecaprevir/pibrentasvir was provided to the patient by the hospital; HCV = hepatitis C virus. TX1 = first transplant; TX2 = second transplant.

Supplemental Figure S2a. Post-transplant alanine aminotransferase (ALT) in recipients of HCV-viremic kidneys



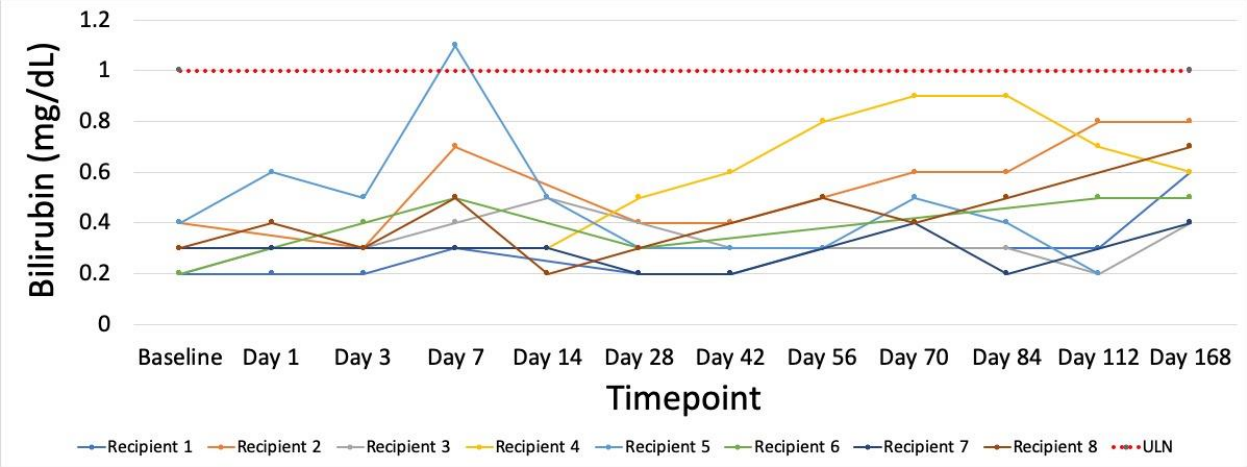
Supplemental Figure S2a. Upper limit of normal for ALT for males shown with dotted horizontal line at 55U/L. Upper limit of normal for females (33 U/L) is not shown. Recipients 1, 4, and 8 had missing data at Day 168, so Day 365 data is presented at this timepoint instead. Recipient 5 does not have ALT data at Day 168.

Supplemental Figure S2b. Post-transplant aspartate aminotransferase (AST) in recipients of HCV-viremic kidneys



Supplemental Figure S2b. Upper limit of normal for AST for males shown with dotted horizontal line at 40U/L. Upper limit of normal for females, 32 U/L, is not shown. Recipients 1, 4, and 8 had missing data at Day 168, so Day 365 data is presented at this timepoint instead. Recipient 5 does not have AST data at Day 168.

Supplemental Figure S2c. Post-transplant total bilirubin in recipients of HCV-viremic kidneys



Supplemental Figure S2c. Upper limit of normal for total bilirubin is shown with a dotted line at 1.0 mg/dL. Recipients 1, 4, and 8 had missing data at Day 168, so Day 365 data is presented at this timepoint instead. Recipient 5 does not have bilirubin data at Day 168.

STROBE Statement—Checklist of items that should be included in reports of ***cohort studies***

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	2
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	3-4
Objectives	3	State specific objectives, including any prespecified hypotheses	7
Methods			
Study design	4	Present key elements of study design early in the paper	4-6
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	4-6
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	4-6
		(*b*) For matched studies, give matching criteria and number of exposed and unexposed	N/A
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	7
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	7
Bias	9	Describe any efforts to address potential sources of bias	6, 7
Study size	10	Explain how the study size was arrived at	4
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	7, 8
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	8
		(*b*) Describe any methods used to examine subgroups and interactions	N/A
		(*c*) Explain how missing data were addressed	11, 15
		(*d*) If applicable, explain how loss to follow-up was addressed	N/A
		(*e*) Describe any sensitivity analyses	N/A
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	8
		(b) Give reasons for non-participation at each stage	8
		(c) Consider use of a flow diagram	8
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	8
		(b) Indicate number of participants with missing data for each variable of interest	11,15
		(c) Summarise follow-up time (eg, average and total amount)	8
Outcome data	15*	Report numbers of outcome events or summary measures over time	9-10

Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	N/A
		(*b*) Report category boundaries when continuous variables were categorized	N/A
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	N/A
Discussion			
Key results	18	Summarise key results with reference to study objectives	11
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	13
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	14
Generalisability	21	Discuss the generalisability (external validity) of the study results	13
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	14

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.