

Outcomes of Heart Transplantation Using HCV Donors

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BACKGROUND

- High rates of death on heart transplant waitlist per United Network for Organ Sharing (UNOS), Partially due to limited supply of appropriate donors and recipients with characteristics unfavorable for transplant (high levels of antibodies, large stature, common blood type)
- New agents available for treatment of hepatitis C virus (HCV) with high rates of efficacy, low side effect profile, and fewer drug interactions
- Liver and kidney transplant programs have utilized HCV-positive donors with good outcomes

CLINICAL QUESTIONS

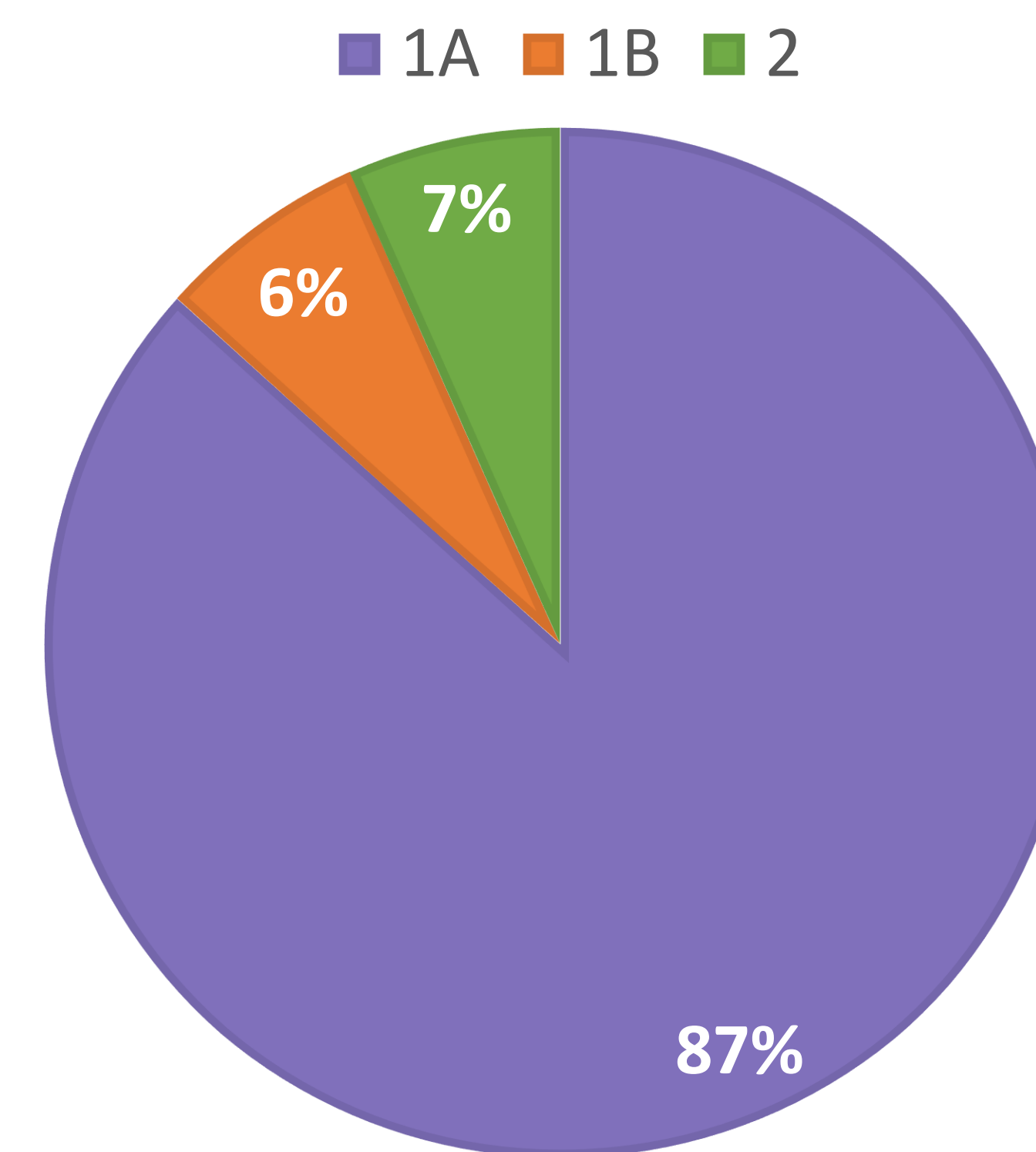
- Could our adult heart transplant program use donors with a history of and/or active hepatitis C infection?
- If recipients receive HCV-positive organs, would they all develop HCV infection?
- If recipients develop HCV, would they be responsive to traditional oral HCV treatment?
- Are there any long-term negative consequences to using HCV-positive donors?

METHODS

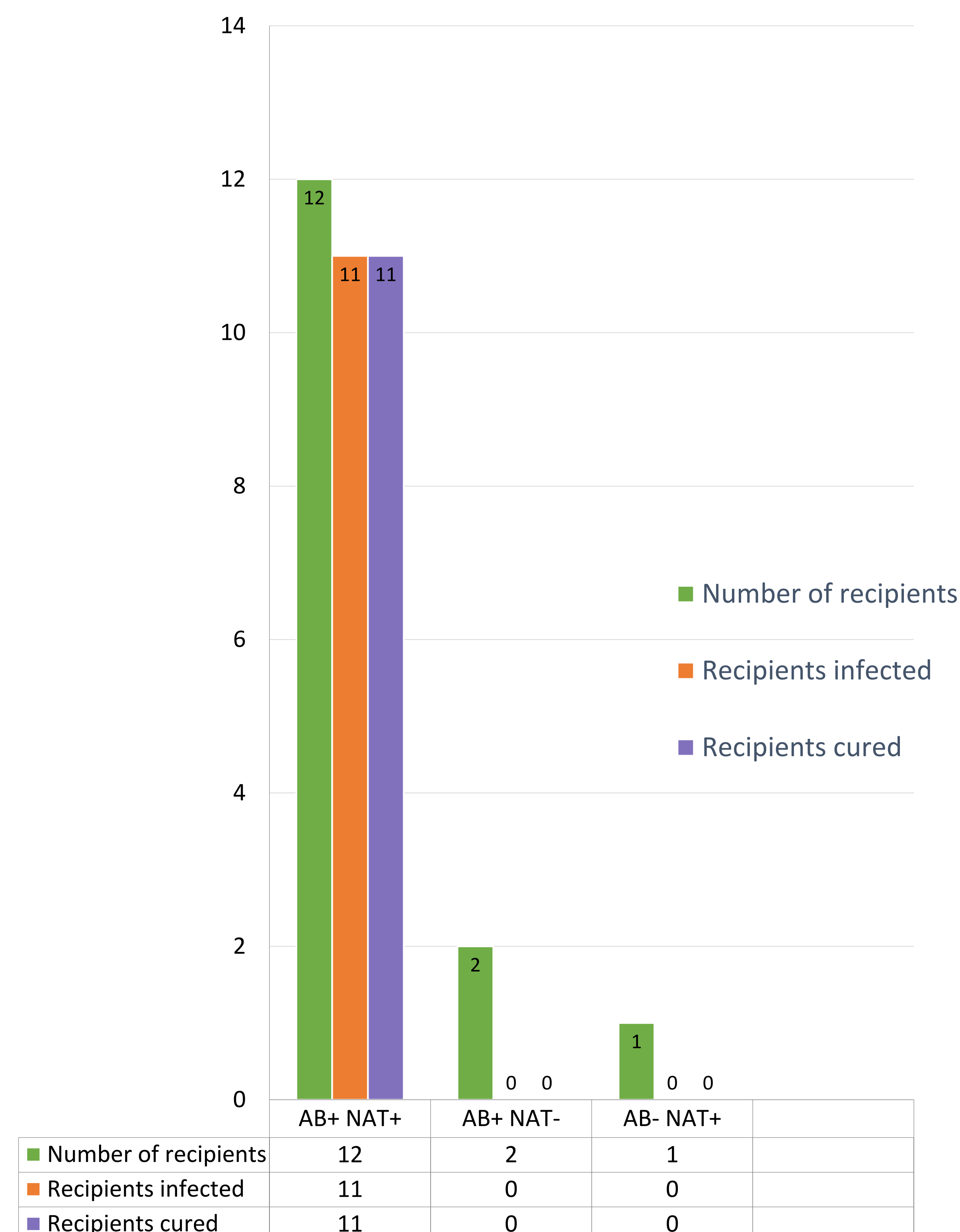
- Descriptive study
- Convenience sample: 15 heart transplant recipients receiving organs between 09/2016 and 06/2017
- Study population: High risk patients (i.e. higher mortality risk, extended waitlist time, complicated match secondary to antibodies). 1 patient had history of cured HCV.
- Patient education regarding risk of receiving HCV-positive transplant
- Informed consent obtained
- Recipient listed in UNOS as willing to accept donor with HCV positive antibody (AB) and/or positive nucleic acid testing (NAT)
- Data collected in secure electronic database

TABLES/FIGURES

STATUS ON WAITLIST AT TIME OF TRANSPLANT



INCIDENCE OF HCV INFECTION AND CURE BY DONOR HCV VIRAL AND ANTIBODY TESTING CATEGORIES



RESULTS

- 11 of 12 patients receiving HCV AB+/NAT+ organs developed HCV infection. The patient who did not develop HCV viremia previously had HCV that was treated and continued to be HCV AB+ at the time of transplant.
- 100% patients developing HCV viremia were successfully treated with oral direct-acting antivirals (either Harvoni or Eplclusa as determined by HCV genotype)
- No patients receiving HCV AB+/NAT- organs developed HCV infection
- No patient receiving HCV AB-/NAT+ organ developed HCV infection
- 100% patients developing HCV infection and completing treatment achieved cure as evidenced by:
 - Undetectable viral level at completion of 12 weeks medication regimen
 - Undetectable viral level at 12 weeks post-treatment completion
- 1 death was noted but cause of death was attributed to non-HCV transplant complication of pulmonary embolism
- 100% of patients' qualitative feedback was positive

CONCLUSIONS

- All patients who developed HCV viremia were treated and achieved cure
- Not all patients who received a HCV organ developed infection
- Patients report waiting on list is stressful/anxiety-provoking and hope of lowered wait time was appreciated
- More data needed on long term effects of donor-derived HCV infection, including risk of CAV

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