

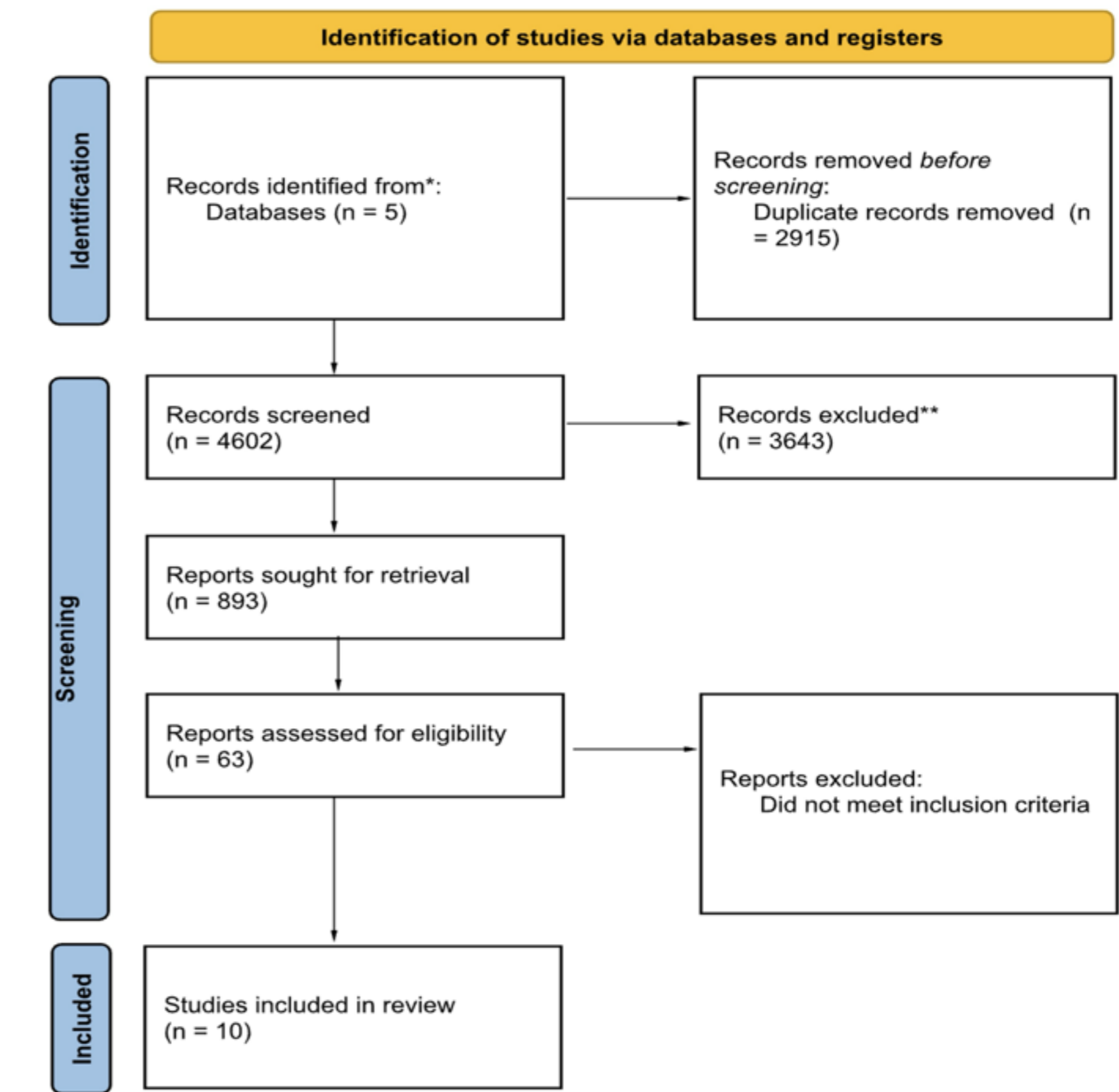
Introduction

- Fulminant life-threatening presentations of acute tropical infectious diseases may occur, and the degree of end-organ impairment may qualify patients for emergency liver solid-organ transplantation (SOT).
- However, liver SOT may not be beneficial in all cases as failure of the transplanted organ is only one possible cause of death¹. The outcomes from such an intervention are largely unknown for many acute tropical infectious diseases.
- Due to a paucity of synthesized data, there is a knowledge gap around indications for and outcomes in liver SOT for severe acute tropical infectious diseases.
- We aim to understand the frequency, indications for, and outcome of SOT in the liver for treatment of acute tropical infectious diseases (such as yellow fever) presenting with fulminant organ failure.

Methods

- We will be conducting a systematic review and meta-analysis.
- PubMed, Embase, Scopus, Cochrane, and LILACS were searched using combinations of search terms such as the following: "liver" or "hepatic", "transplant", "yellow fever", "dengue" from database inception to January 2023.

Table 1. PRISMA Flow Diagram for Liver SOT Systematic Review Updated Literature Review January 2023



Results

Figure 1. Analysis of Type of Tropical Infectious Disease

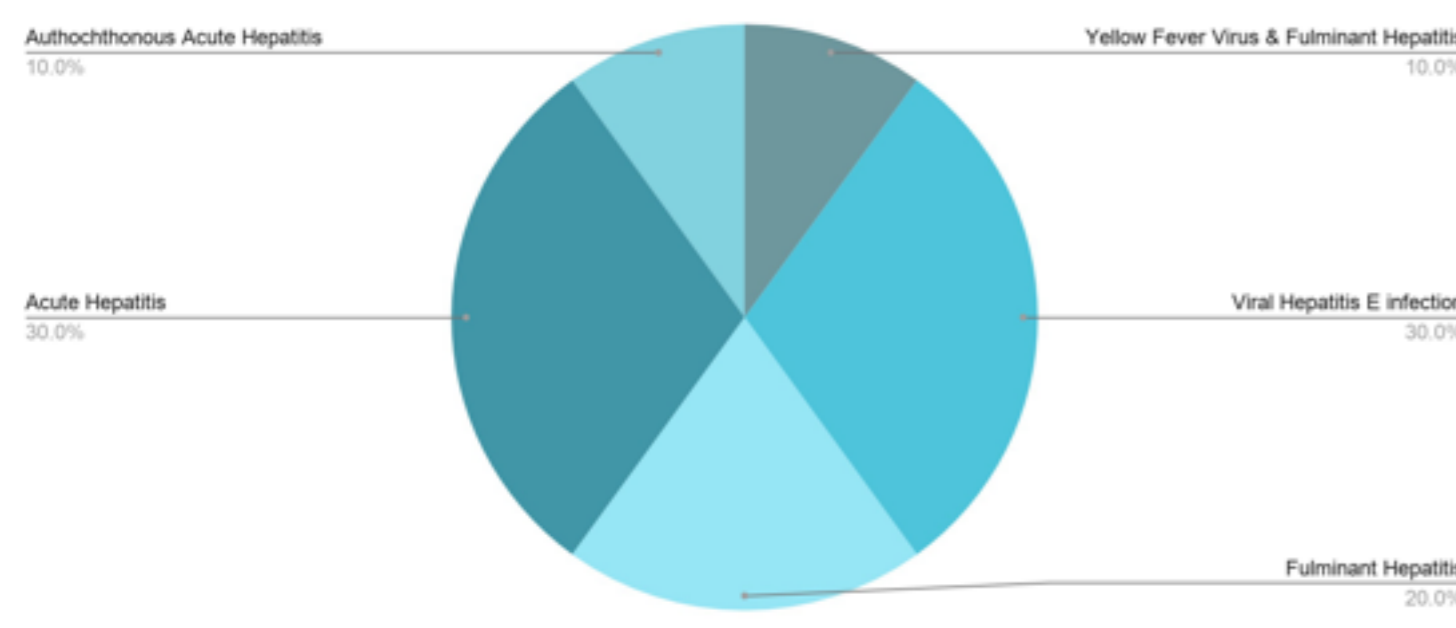


Figure 2. Analysis of Type of Pathogen

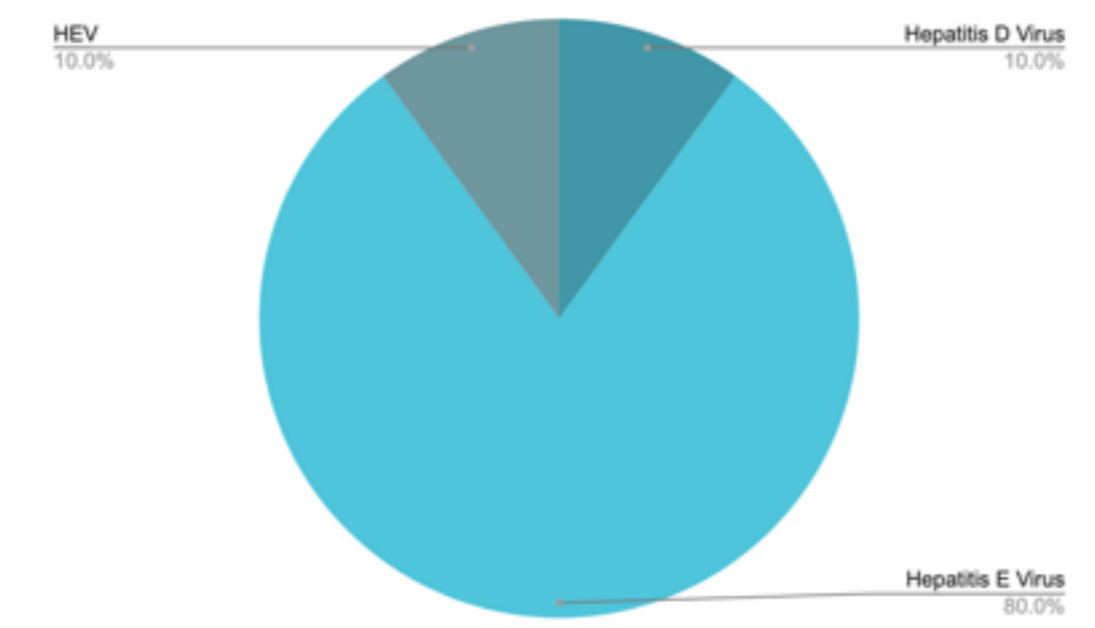
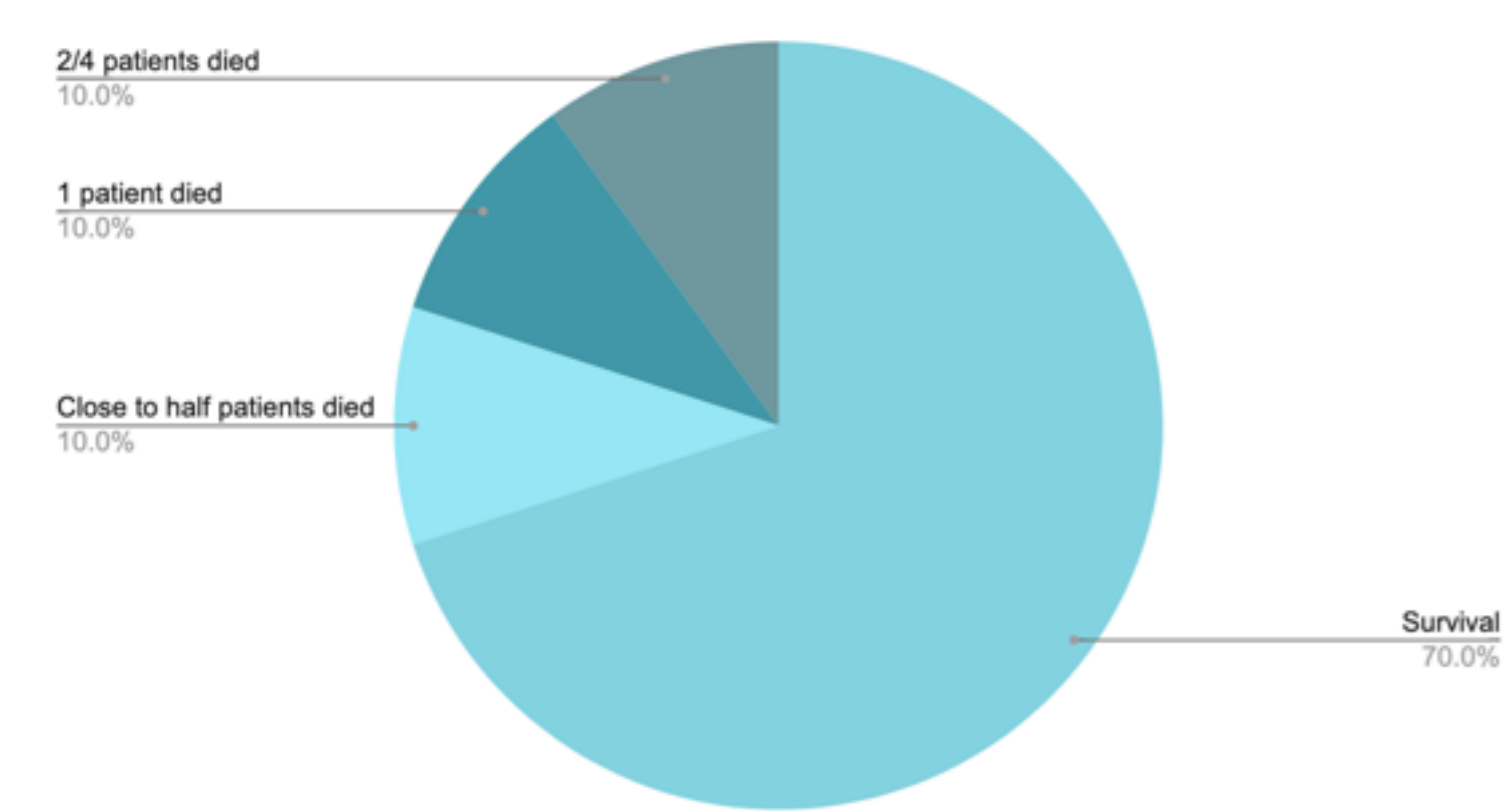


Figure 3. Analysis of Patient Outcomes



Discussion & Conclusion

- Due to a paucity of synthesized data, there is a knowledge gap around indications for and outcomes in liver SOT for severe acute tropical infectious diseases.
- Most published literature on SOT in acute tropical infectious diseases is related to liver transplantation for Hepatitis E Virus infection and overall patient outcomes show survival.

First Author (Last and First Name)	Article Title	Year of Publication	Journal	Vol, Issue, Page #s	Population (N)	Age	Sex	Organ	Tropical Disease(s)	Pathogen (Full name)	Method of Diagnosis	Outcome	DOI
Song, Alice Tug Wang	Liver transplantation for fulminant hepatitis due to yellow fever (Y)	2018	Hepatology	N/A	1	27 years old	Female	Liver	Yellow Fever Virus (YFV), Fulminant Hepatitis (Acute Liver Failure)	Hepatitis D Virus (HDV)	Antibody Detection	Patient survived	10.1002/hep.30273
Haffar, Samir	Acute liver failure caused by hepatitis E virus genotype 3 and 4: A systematic review and pool analysis (Y)	2018	Liver International	Vol. 38, Issue 11, Pages 1966-1973	64	Median age 58 years (range: 3-79)	Male to female ratio of 1.2:1	Liver	Viral Hepatitis E infection	Hepatitis E Virus genotype 3 and 4	Antibody Detection	58 patients died (46% mortality)	doi: 10.1111/liv.13861
Shimata, Keita	A Case Report of Living Donor Liver Transplantation for Fulminant Hepatitis Related to Hepatitis E Virus Infection (Y)	2018	Progress in Transplantation	Vol. 28, Issue 1, Pages 91-92	1	63 years old	Male	Liver	Fulminant Hepatitis (Acute Liver Failure)	Hepatitis E Virus (HEV)	Antibody Detection	Patient survived; It took 2.5 months for HEV RNA to become undetectable; Patient was discharged from hospital on postoperative day 43; 8 months posttransplant, his graft function is normal & HEV RNA has remained negative	10.1177/1526924817746912
Tenorio González, Elena	Retransplant Due to Fulminant Hepatic Failure From Hepatitis E Virus: A Case Report (Y)	2018	Transplantation Proceedings	Vol. 50, Issue 2, Pages 685-686	1	26 years old	Female	Liver	Fulminant Hepatic Failure (Acute Liver Failure)	Hepatitis E Virus (HEV)	Antibody Detection	Patient survived; Negative HEV RNA; One year later, patient is in excellent post-transplant condition on treatment with tacrolimus.	10.1016/j.transproceed.2017.09.059
Li, Iris Wai Sum	Acute hepatitis E virus infection causing acute liver failure requiring living-donor liver transplantation in a non-pregnant immunocompetent woman (Y)	2017	Transplant Infectious Disease	Vol. 19, Issue 3	1	46 years old	Female	Liver	Acute viral Hepatitis E infection (acute liver failure)	Hepatitis E Virus (HEV genotype 3)	Antibody Detection	Patient survived; no HEV reactivation 4 years post liver transplant	10.1111/tid.12699
Ramsay, Isobel	Liver transplantation for acute liver failure because of genotype 3 hepatitis E virus infection (Y)	2015	American Association for the Study of Liver Diseases	Vol. 21, Issue 12, Pages, 1557-1559	1	49 years old	Male	Liver	Acute Hepatitis	Hepatitis E Virus (HEV)	Antibody Detection	All 9 patients survived	10.1002/lt.24213
Crossan, Claire Louise	Hepatitis E virus in patients with acute severe liver injury (Y)	2014	World journal of Hepatology	Vol. 6, Issue 6, pgs 426-434	80	38.7 years old mean	36 males, 44 females	Liver	Acute Hepatitis	Hepatitis E	Antigen Detection	1 patient died	10.4254/wj.h.v6.i6.426
Aherfi, Sarah	Liver transplantation for acute liver failure related to autochthonous genotype 3 hepatitis E virus infection (Y)	2014	Clinics and Research in Hepatology and Gastroenterology	Vol. 38, Issue 1, Pages 24-31	4	58, 37, 29, 41	Male	Liver	Autochthonous Acute Hepatitis	Hepatitis E Virus of Genotype 3 (HEV-3)	Antibody Detection	2/4 patients died	doi: 10.1016/j.clinre.2013.05.013
Paskaran, P.	A Case Report of Hepatitis E Infection Leading to Acute Liver Failure and Transplantation (Y)	2008	Clinical Medicine: Case Report	Vol. 1, Pages 133-135	1	31	Female	Liver	Hepatitis E Infection	Hepatitis E Virus (HEV)	Antibody Detection	Survival	N/A
Nicoluzzi, Joao	Hepatitis E-Associated Subacute Liver Failure: A Rare Indication for Liver Transplantation (Y)	2001	The American Journal of Gastroenterology	Vol. 96, Pages 2278-2279	1	49	Male	Liver	Acute Hepatitis	HEV	Antibody Detection	Survival	10.1111/j.1572-0241.2001.03990.x

Table 2. Summary of Findings Table for Data Synthesized in this Project

*A sincere thank you to human biology undergraduate students at the University of Toronto named Tom E. Joseph and Giuseppe Joshua Lopez for their help in advancing this project.

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