

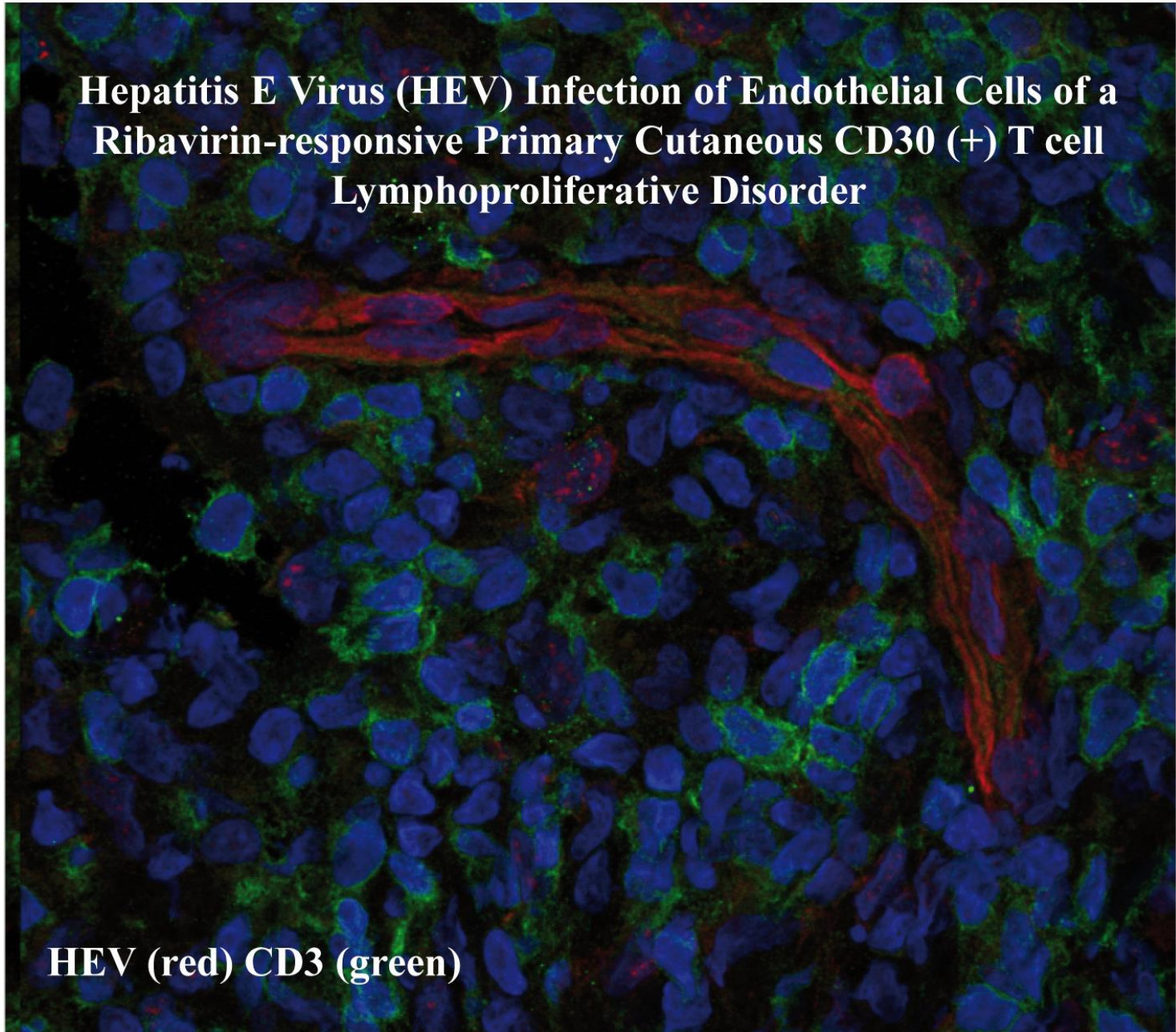
Manifestations extra-hepatiques du VHE

Vincent Mallet, MD, PhD

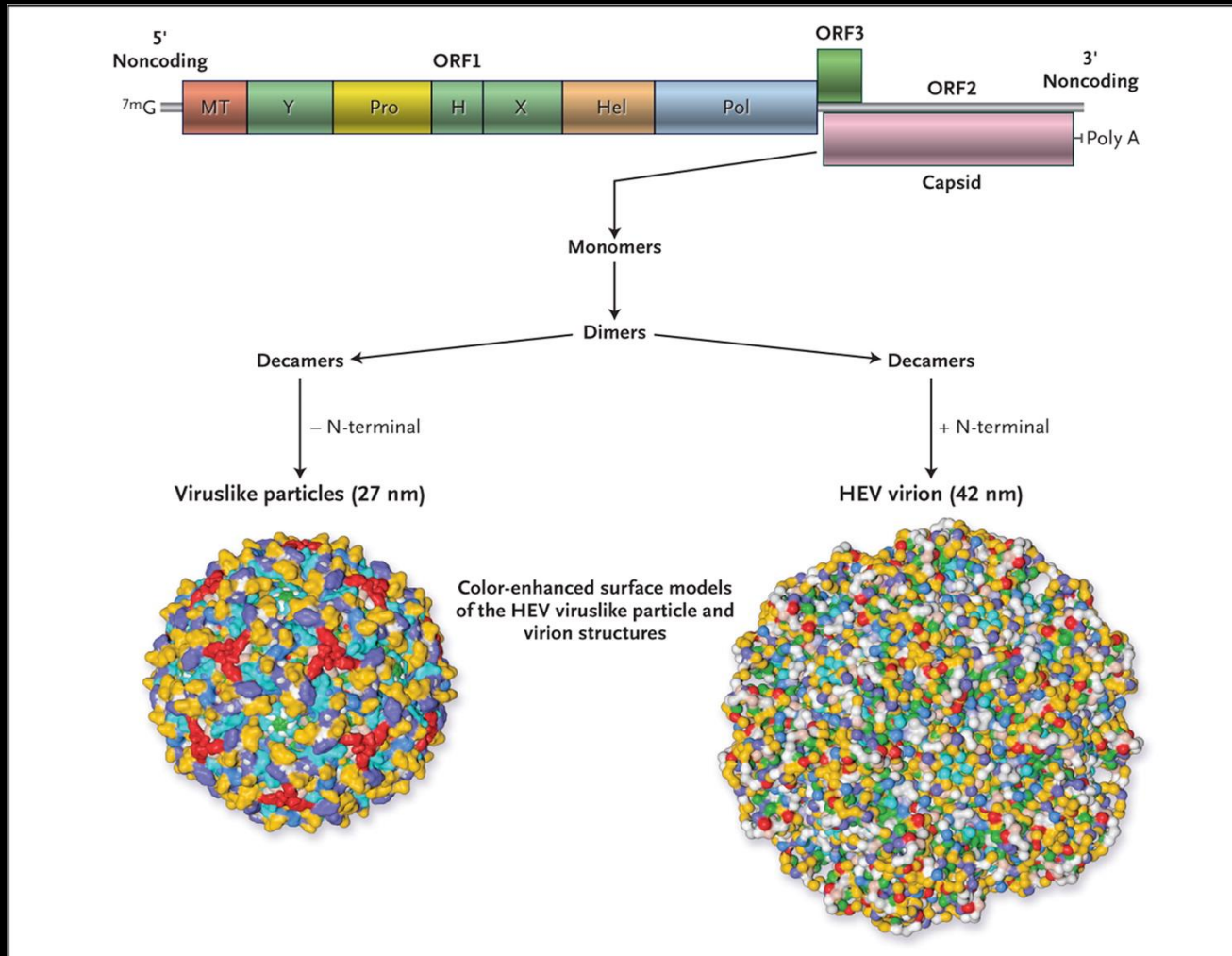
CHU Cochin, Université Paris
Descartes, APHP, Inserm

**Hepatitis E Virus (HEV) Infection of Endothelial Cells of a
Ribavirin-responsive Primary Cutaneous CD30 (+) T cell
Lymphoproliferative Disorder**

HEV (red) CD3 (green)



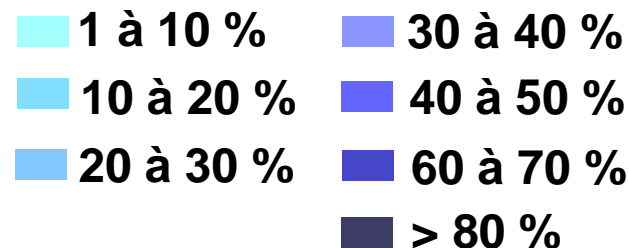
Structure of the Hepatitis E Virus (HEV) and Its RNA Genome.



Ile de France



IgG anti-VHE : 22,4 %



IgM anti-VHE : 1 %

Séroprévalence anti-VHE chez les donneurs de sang

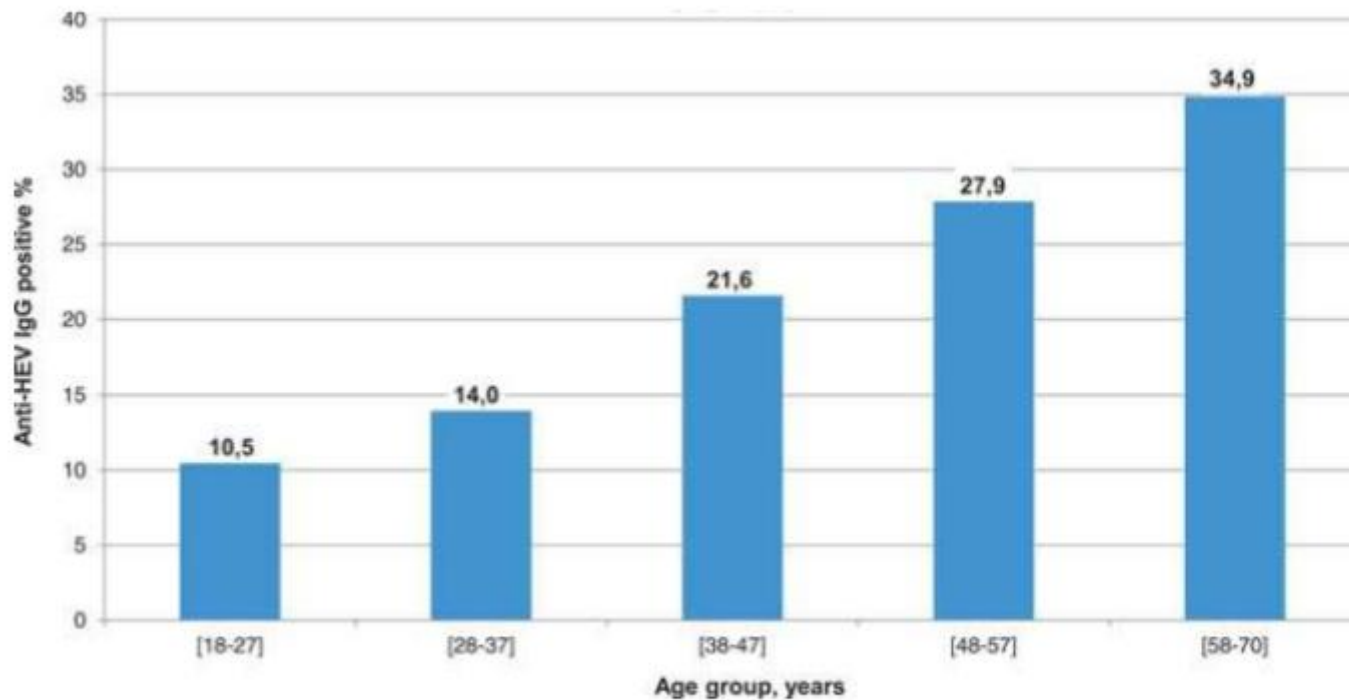
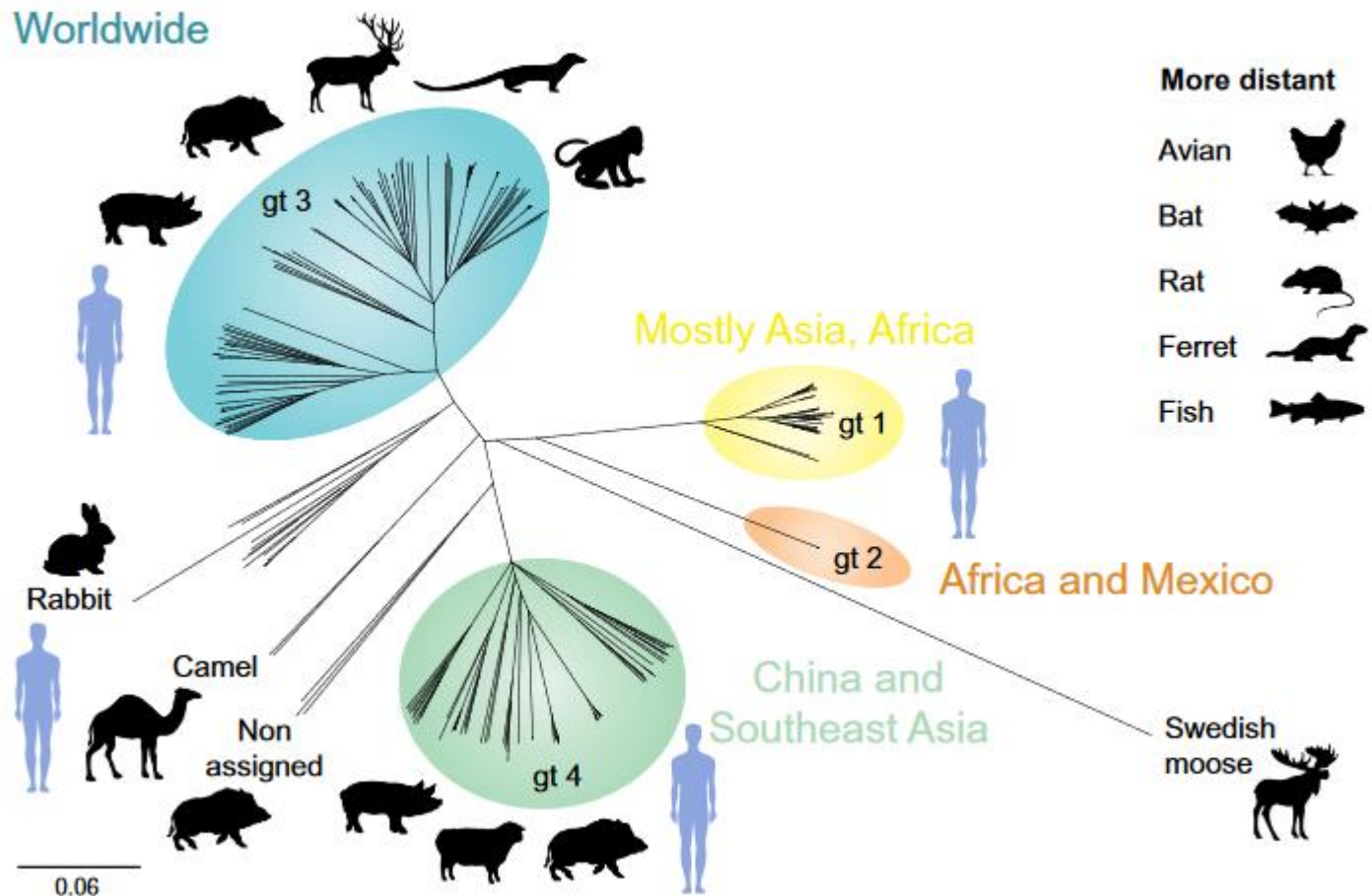
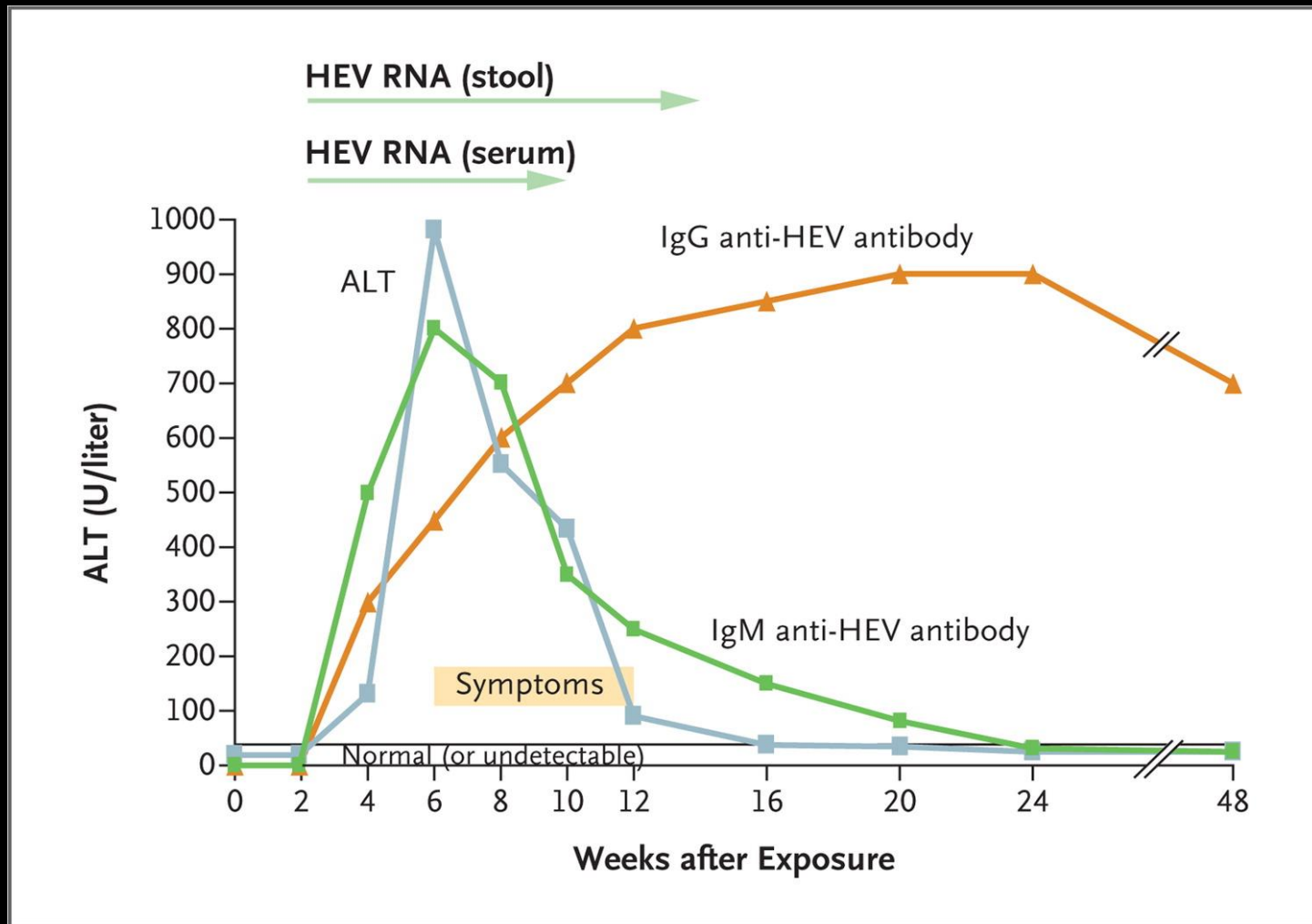


FIG. 2. Prevalence of anti-HEV IgG in donors by age group (square brackets).

Hepatitis E transmission



Course of Acute HEV Infection.

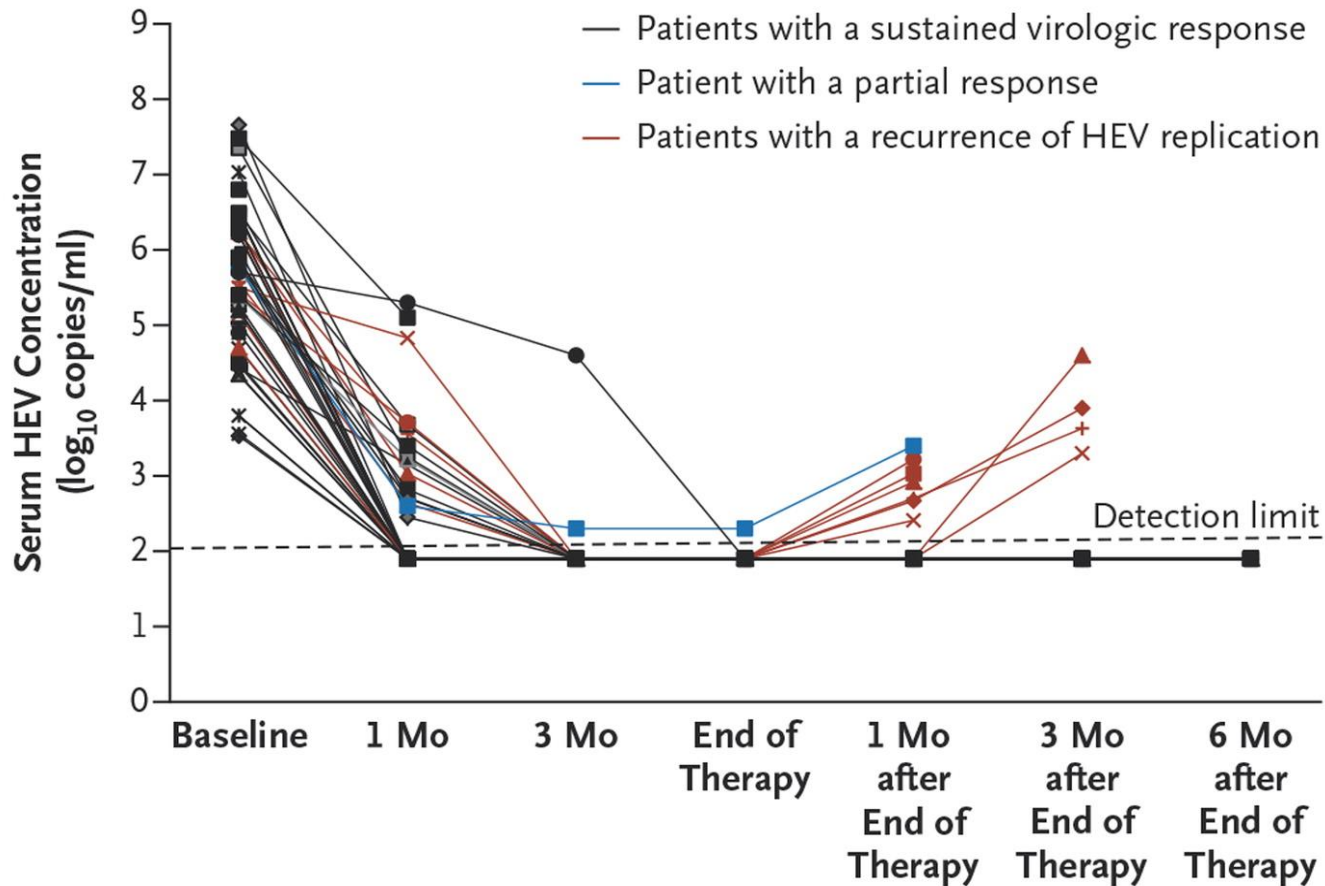


BRIEF REPORT

Hepatitis E Virus and Chronic Hepatitis in Organ-Transplant Recipients

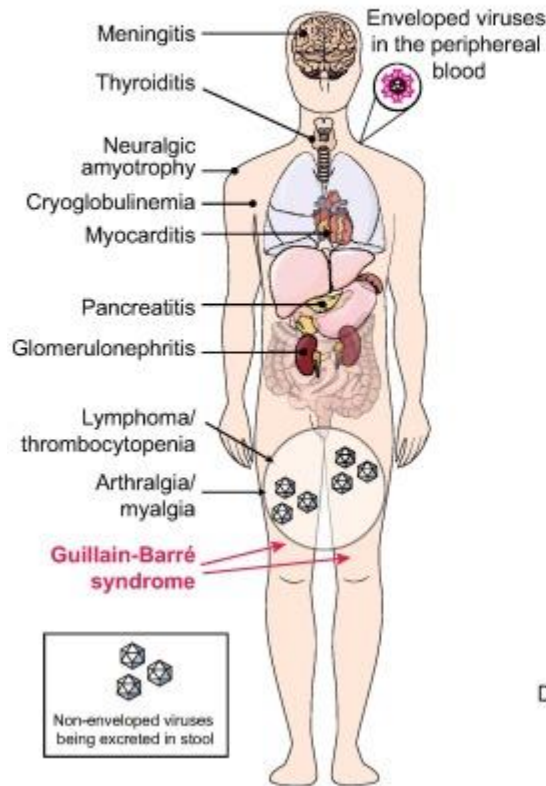
Nassim Kamar, M.D., Ph.D., Janick Selves, M.D., Jean-Michel Mansuy, M.D.,
Leila Ouezzani, M.D., Jean-Marie Péron, M.D., Ph.D., Joëlle Guitard, M.D.,
Olivier Cointault, M.D., Laure Esposito, M.D., Florence Abravanel, Pharm.D.,
Marie Danjoux, M.D., Dominique Durand, M.D., Jean-Pierre Vinel, M.D.,
Jacques Izopet, Pharm.D., Ph.D., and Lionel Rostaing, M.D., Ph.D.

Hepatitis E Virus (HEV) Concentration during Ribavirin Therapy.

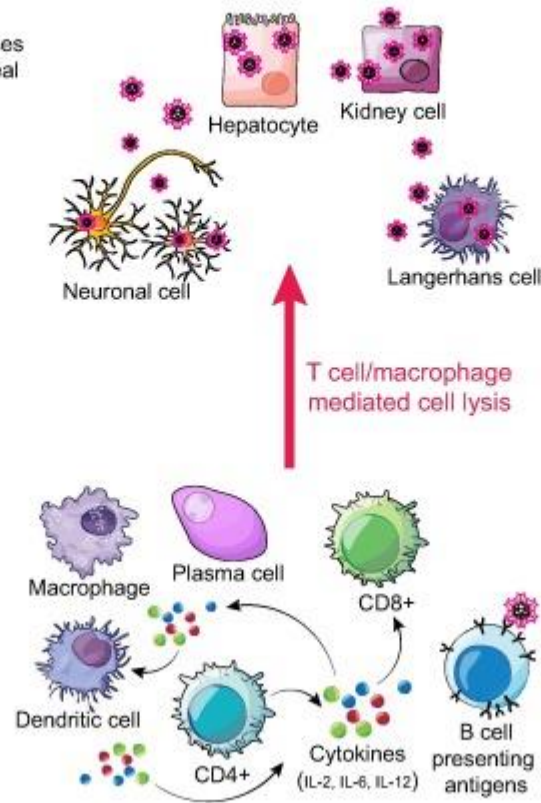


Extrahepatic manifestations

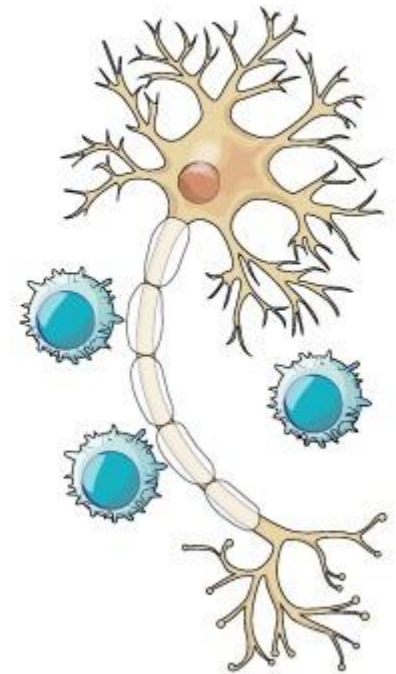
A Reported extrahepatic organ manifestations in the context of hepatitis E virus infection



B Possible mechanisms of extrahepatic symptoms in the context of HEV replication



C Possible mechanisms of neurological manifestations in the absence of HEV replication



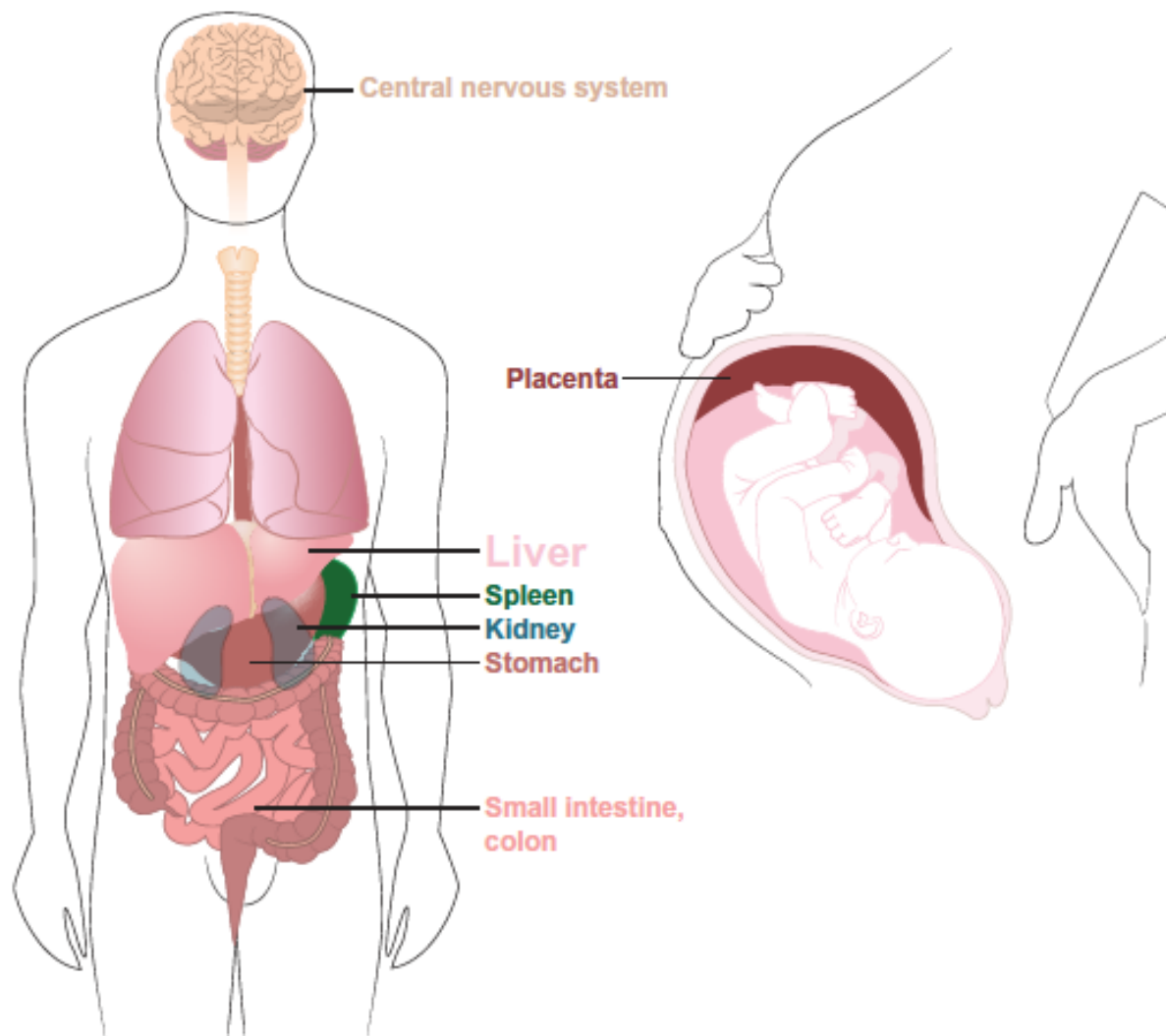
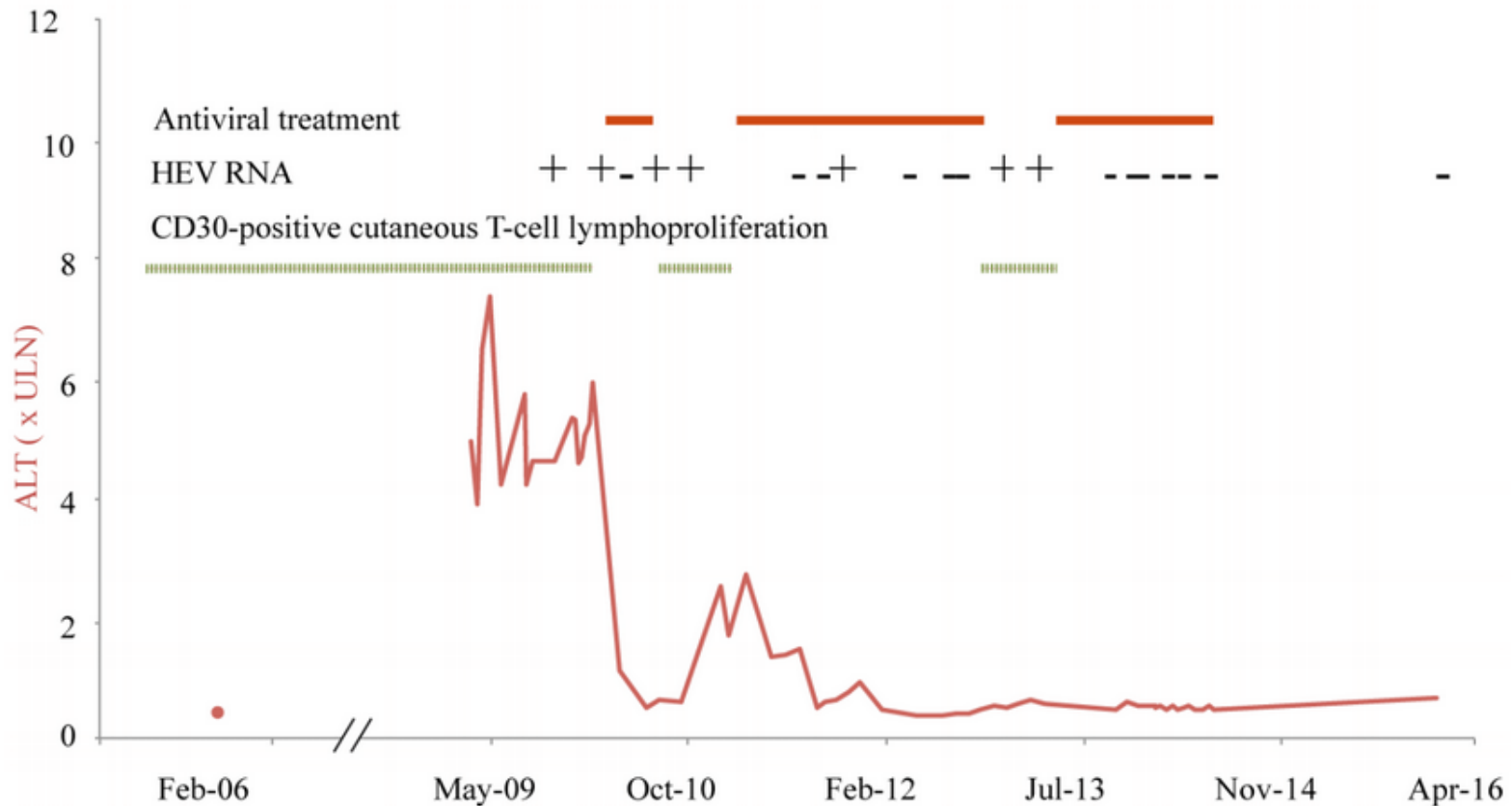
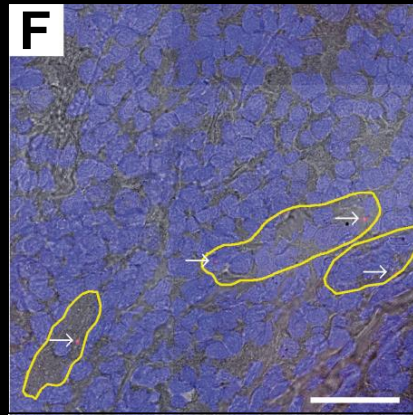
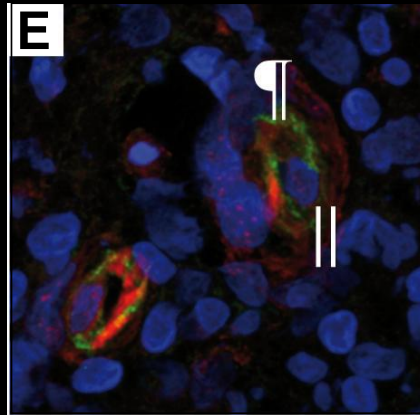
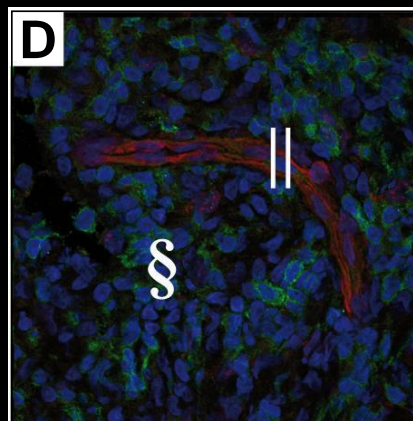
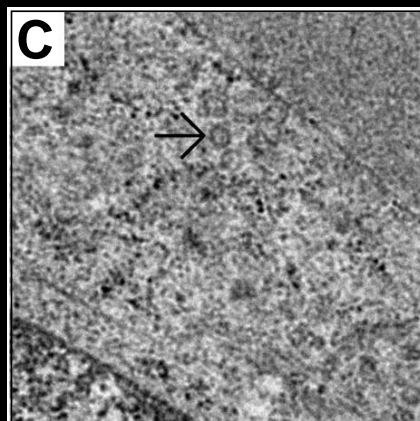
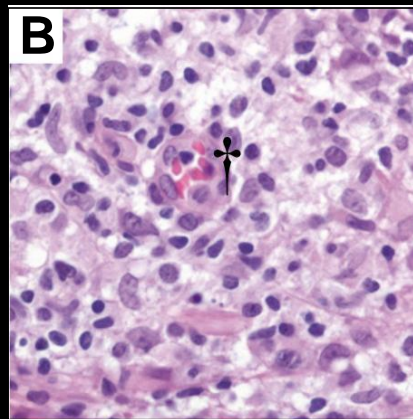
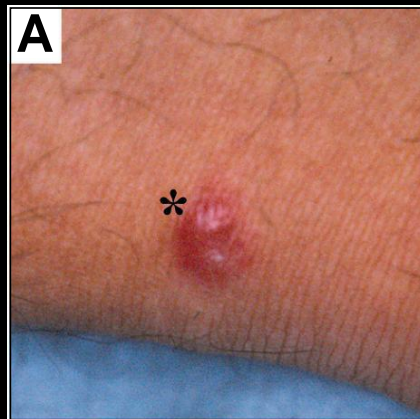


Fig. 4. Reported sites of HEV replication. HEV infects and replicates primarily in the liver. However, studies performed in animal models reported HEV replication also in the small intestine, colon and lymph nodes as well as kidney, spleen and stomach. Furthermore, replication in the kidney has been recently suggested by the presence of HEV in the urine of patients with acute and chronic HEV as well as experimentally infected monkeys. Among extrahepatic manifestations, neurological complications are the most frequent. HEV RNA has been found in the cerebrospinal fluid of some patients with such complications and evidence for intrathecal antibody production has been provided in one case, suggesting possible infection of the central nervous system. The most severe symptoms are observed in pregnant women, possibly related to the reported infection of placental tissue.

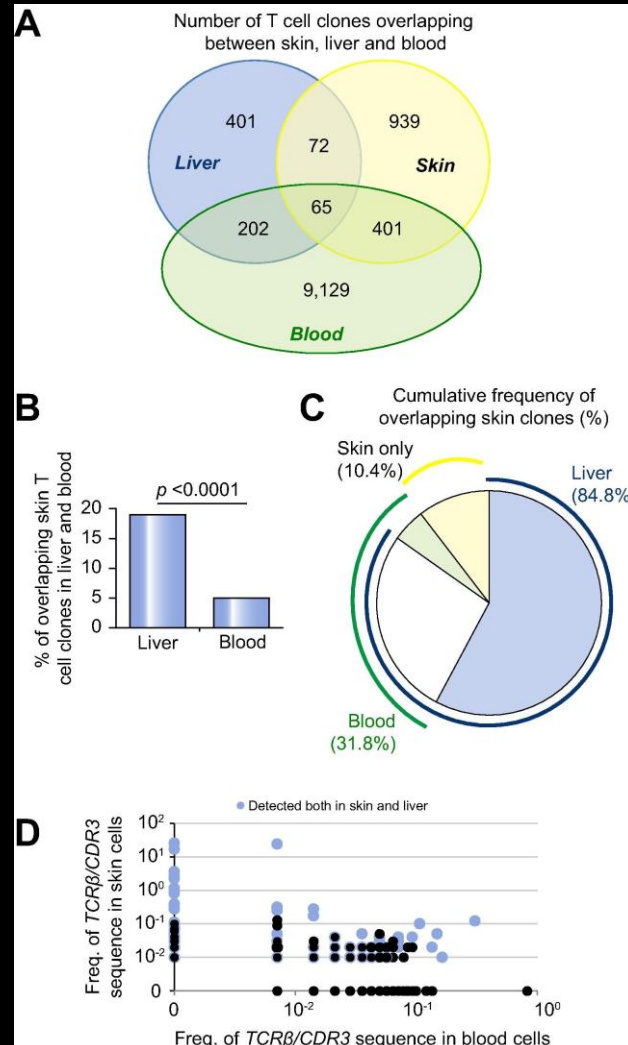
Hepatitis E virus-induced primary cutaneous CD30(+) T cell lymphoproliferative disorder



Clinical and virological courses under antiviral treatment in a Caucasian male with a CD30(+) cutaneous T-cell lymphoproliferative disorder and chronic HEV infection



TCR β /CDR3 high-throughput sequencing of circulating and tissue-resident T cells.



Key messages on HEV

- First cause of acute hepatitis worldwide
- Emerging autochthonous infectious disease
- HEV should always be searched in the setting of acute/chronic unexplained liver disease
- Use PCR
- Ribavirin is a treatment of HEV
- Extrahepatic replication of HEV accounts for extrahepatic diseases, including lymphoproliferative disorders

Recommendations

- Compromised patients should be informed about the risks of foodborne transmission of HEV (A III)
- For patients with chronic HEV, reduction of immunosuppressive drugs could be considered (B III)
- For patients with chronic HEV, antiviral therapy with ribavirin could be considered (B III)

Mallet V, et al. Management of viral hepatitis in patients with haematological malignancy and in patients undergoing haemopoietic stem cell transplantation: recommendations of the 5th European Conference on Infections in Leukaemia (ECIL-5). Lancet Infect Dis. 2016;16(5):606-17.

Acute hepatitis during SCT/chemotherapy:

Screening recommendations

HBV (AII)	HBsAg, NAT
HEV (AIII)	NAT
HCV (AIII)	NAT
Anti-HAV IgM antibodies (AIII)	Anti-HAV IgM antibodies
ADV, CMV, EBV, HSV, VZV ¹ NAT: Nucleic Acid Testing	NAT Mallet V, et al. Management of viral hepatitis in patients with haematological malignancy and in patients undergoing haemopoietic stem cell transplantation: recommendations of the 5th European Conference on Infections in Leukaemia (ECIL-5). Lancet Infect Dis. 2016;16(5):606-17.