

Future Direction of Liver Transplantation

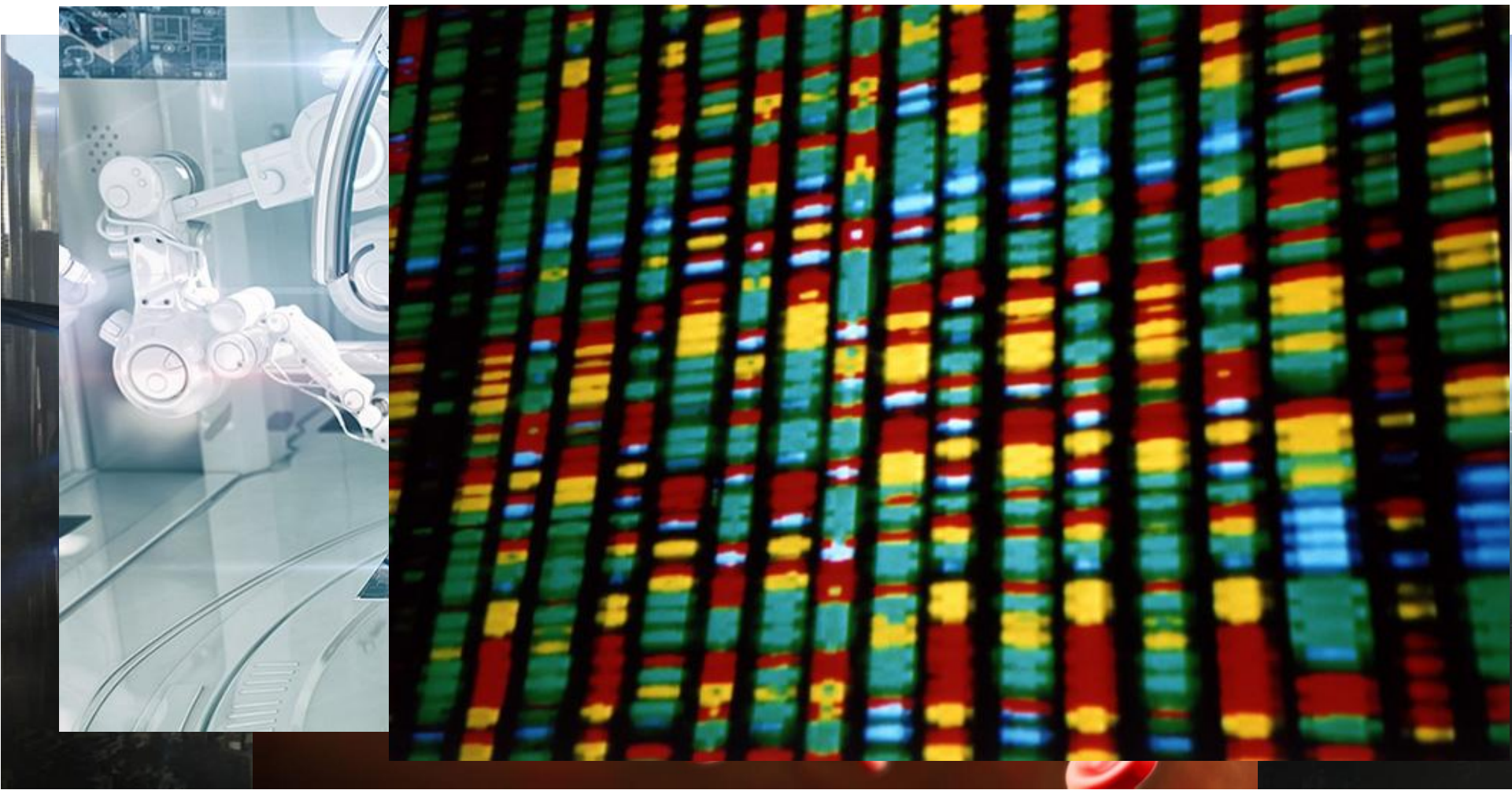
Kevork M Peltekian, MD, FRCPC
@LiverSensible

Transplant Atlantic November 4, 2016

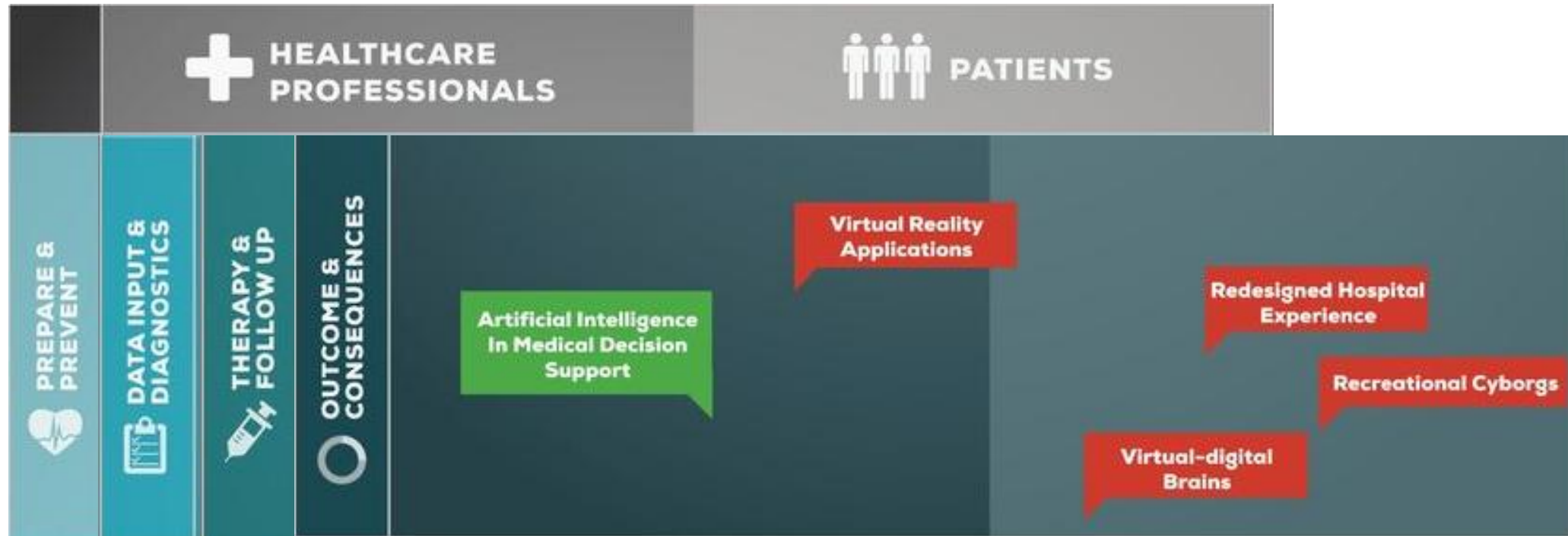
Learning Objectives of the Morning Sessions

- *To discover the evolution of the Multi-Organ Transplant Program*
- *To gain knowledge of future innovations surrounding liver transplantation*
- *To have an increased understanding of new technologies related to kidney and heart transplantation*

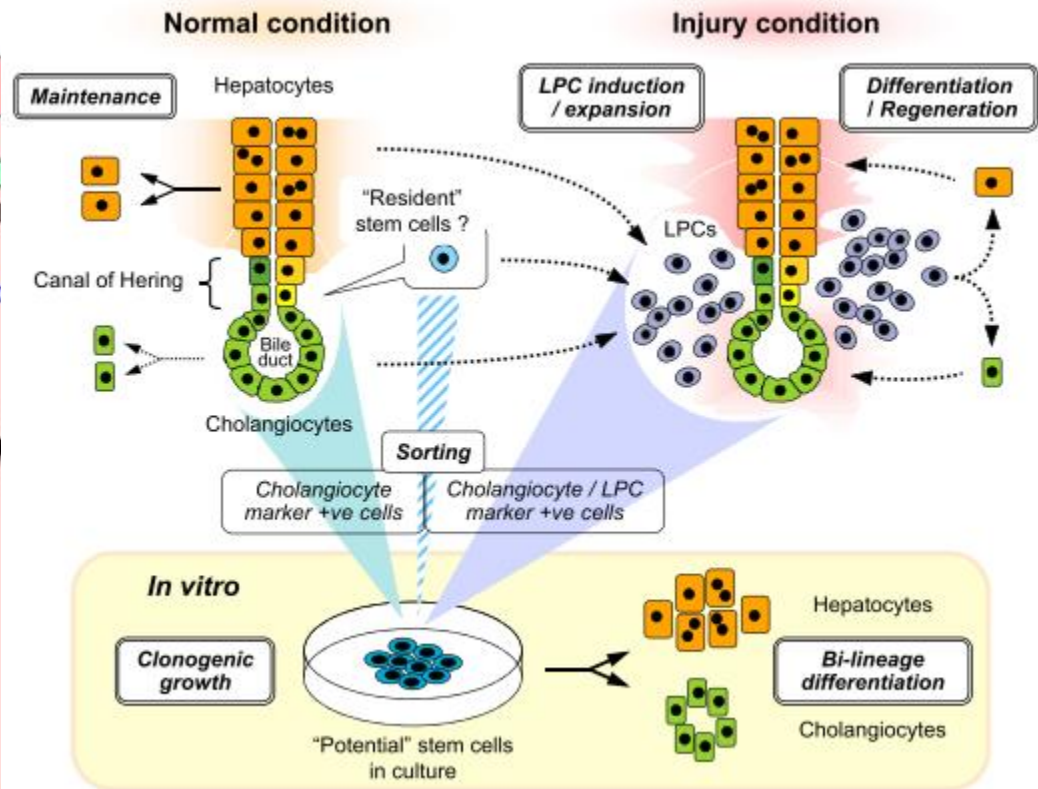
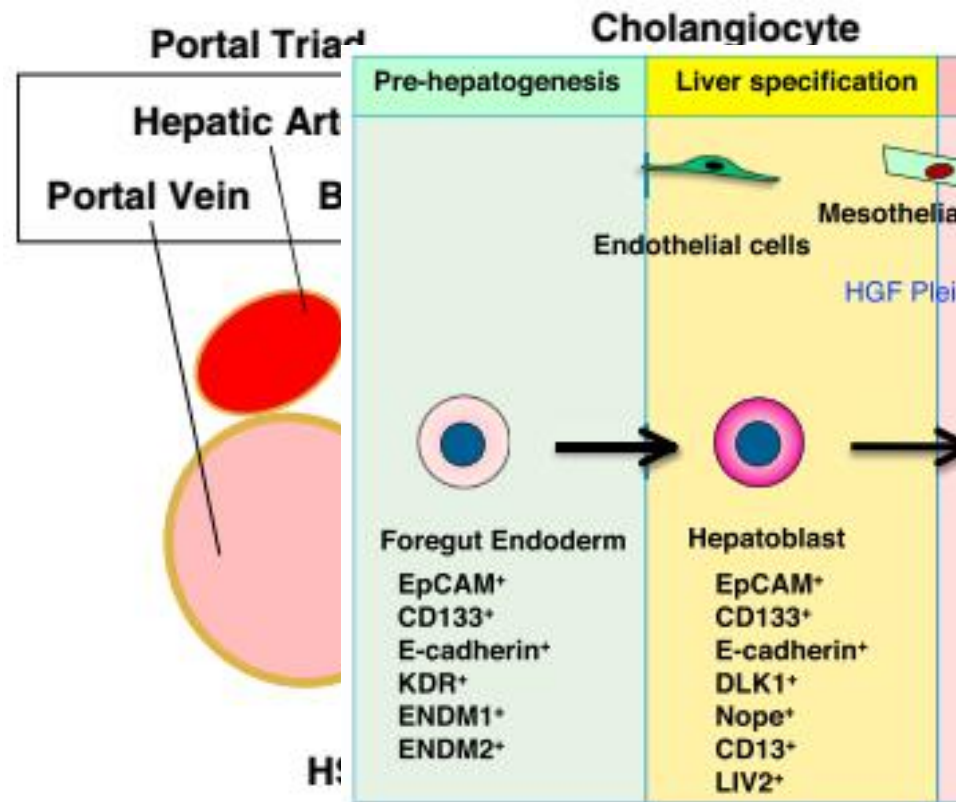
What I See In The Future



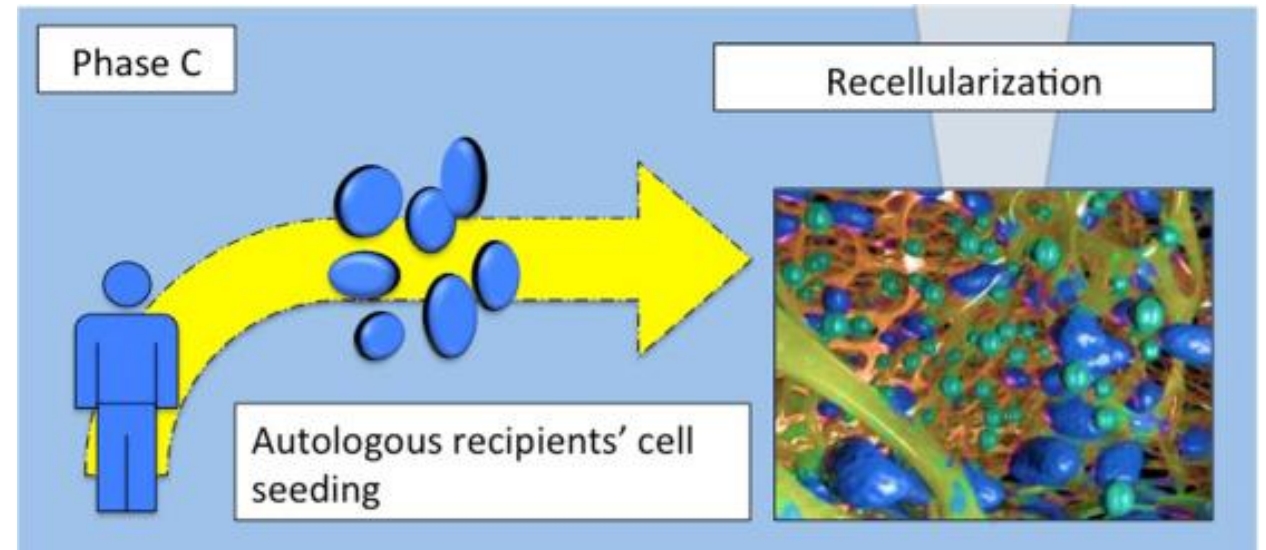
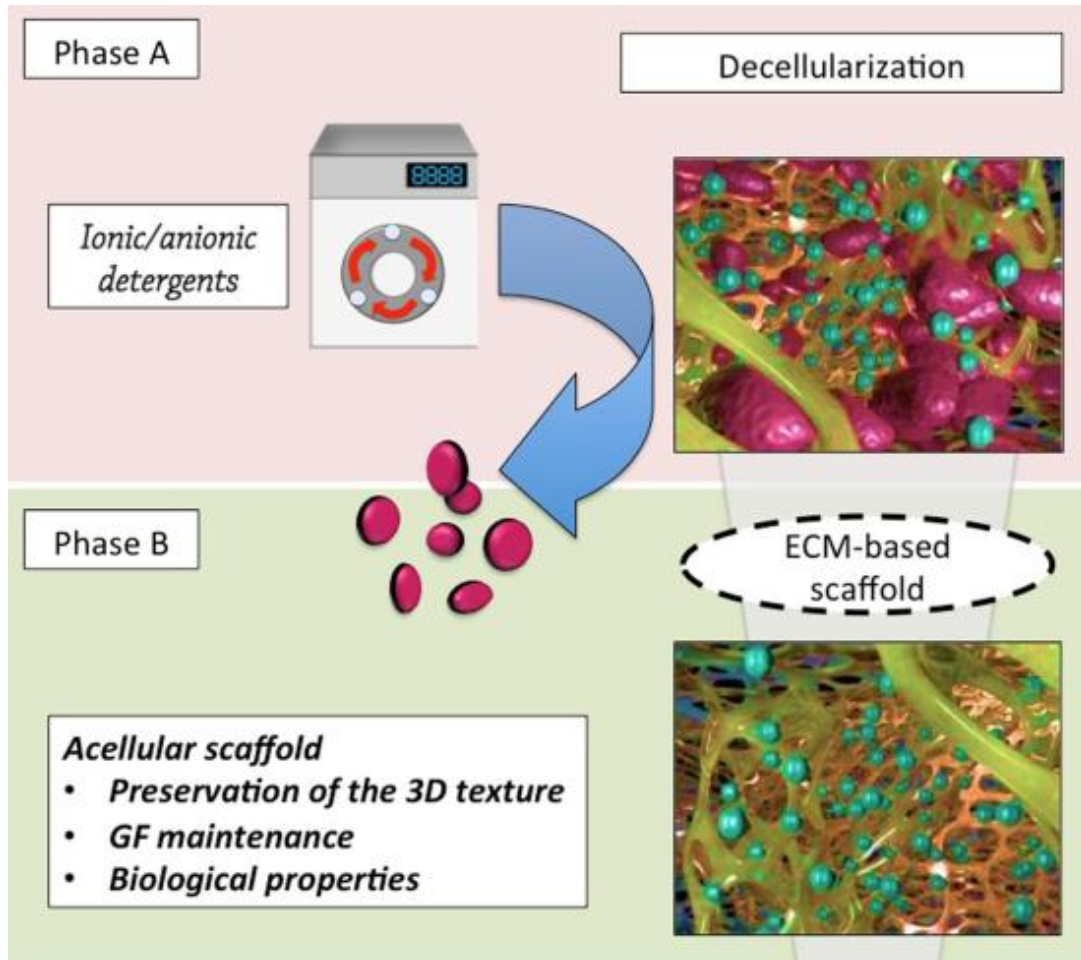
The Future of Medicine



Stem/Progenitor Cells in Liver Development, Homeostasis, Regeneration, and Reprogramming



Current achievements and future perspectives in whole-organ bioengineering



Current Status of Hepatocyte Transplantation

TABLE 1. Liver conditions where hepatocyte transplantation has been used clinically

Inborn errors of metabolism

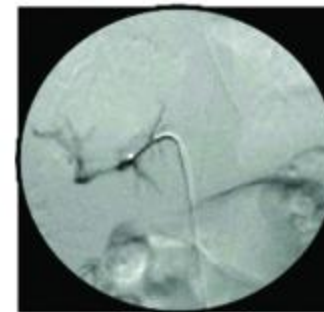
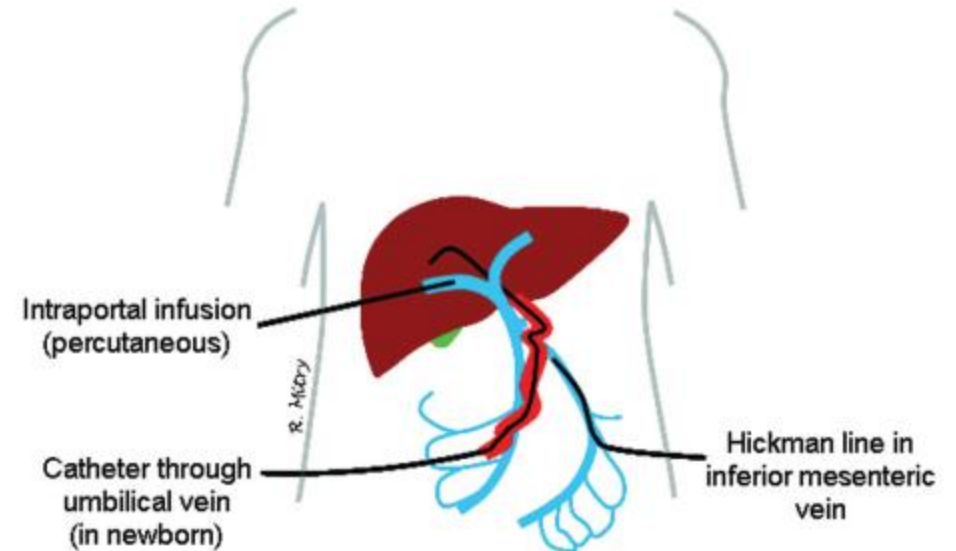
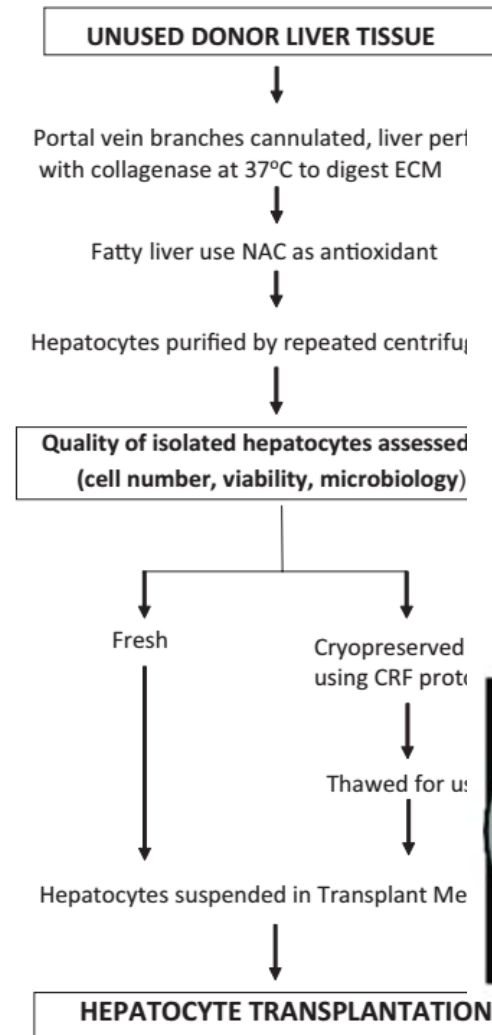
- Crigler-Najjar syndrome type 1
- Familial hypercholesterolemia
- FVII deficiency
- Glycogen storage disease type I
- Infantile Refsum's disease
- Progressive familial intrahepatic cholestasis type 2 PFIC2
- Urea cycle defects
 - Ornithine transcarbamylase deficiency
 - Argininosuccinate lyase deficiency
 - Carbamoylphosphate synthase type 1 deficiency
 - Citrullinemia

Acute liver failure

- Drug
- Viral
- Idiopathic
- Mushroom poisoning
- Postsurgical
- Acute fatty liver of pregnancy

Acute on chronic liver failure

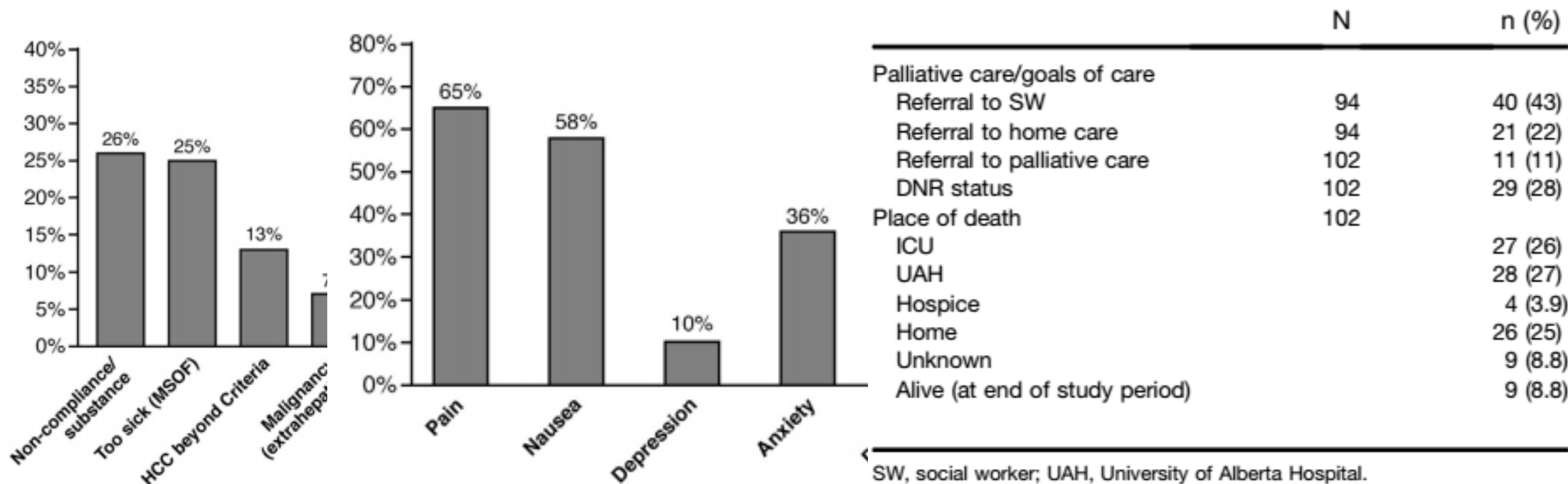
- Alpha 1 antitrypsin deficiency
- Viral
- Alcohol



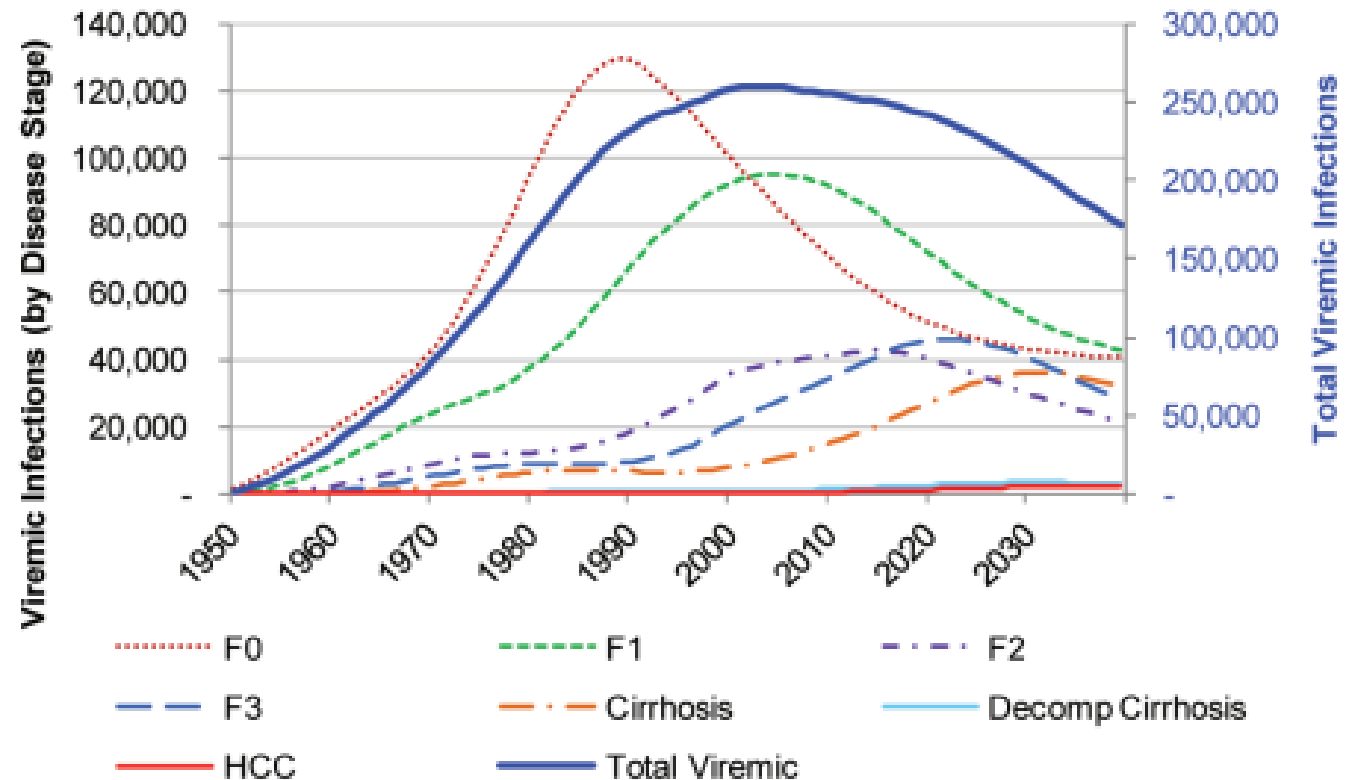
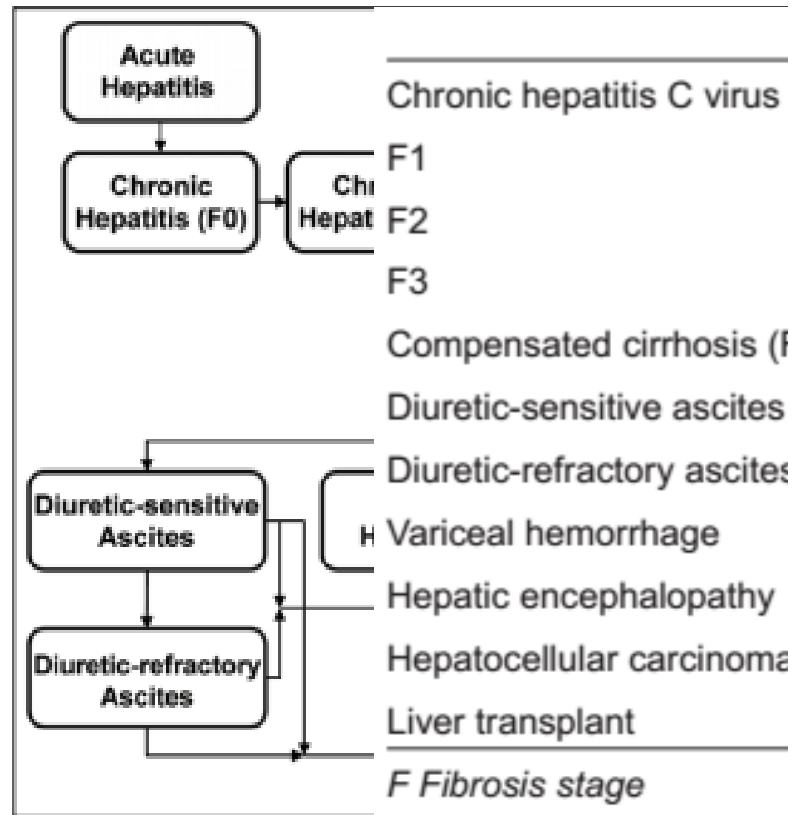
Main Criteria

- Fresh or cryopreserved hepatocytes
- Cell viability should be >60%
- ABO blood group compatible
- Up to 10^9 cells per infusion
- Portal pressure monitoring
- Repeated up to 5-10% liver mass
- Immunosuppression – tacrolimus & steroids

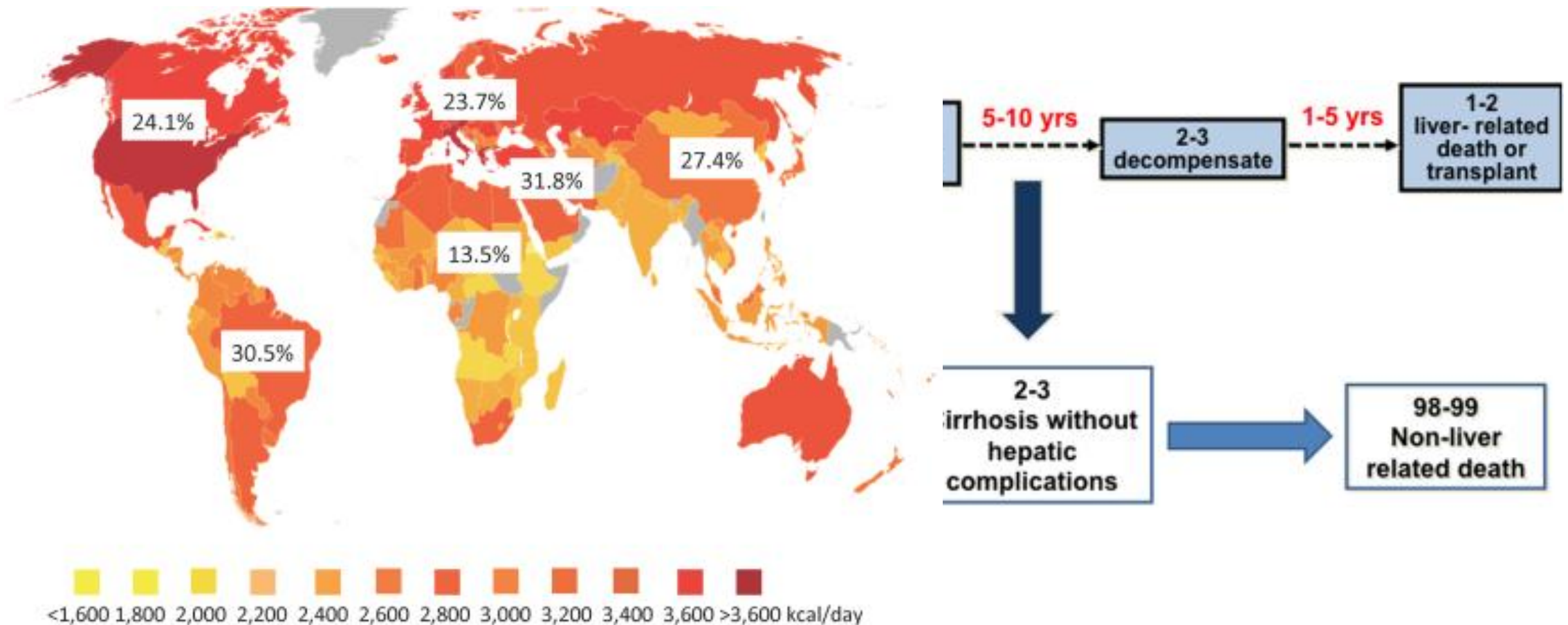
Patients With Cirrhosis and Denied Liver Transplants Rarely Receive Adequate Palliative Care



Burden of Disease and Cost of Chronic Hepatitis C Virus Infection in Canada



The Globalization of Fatty Liver Disease Prevalence and Impact on World Health



Questions



#CoffeeGoodForLiver



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