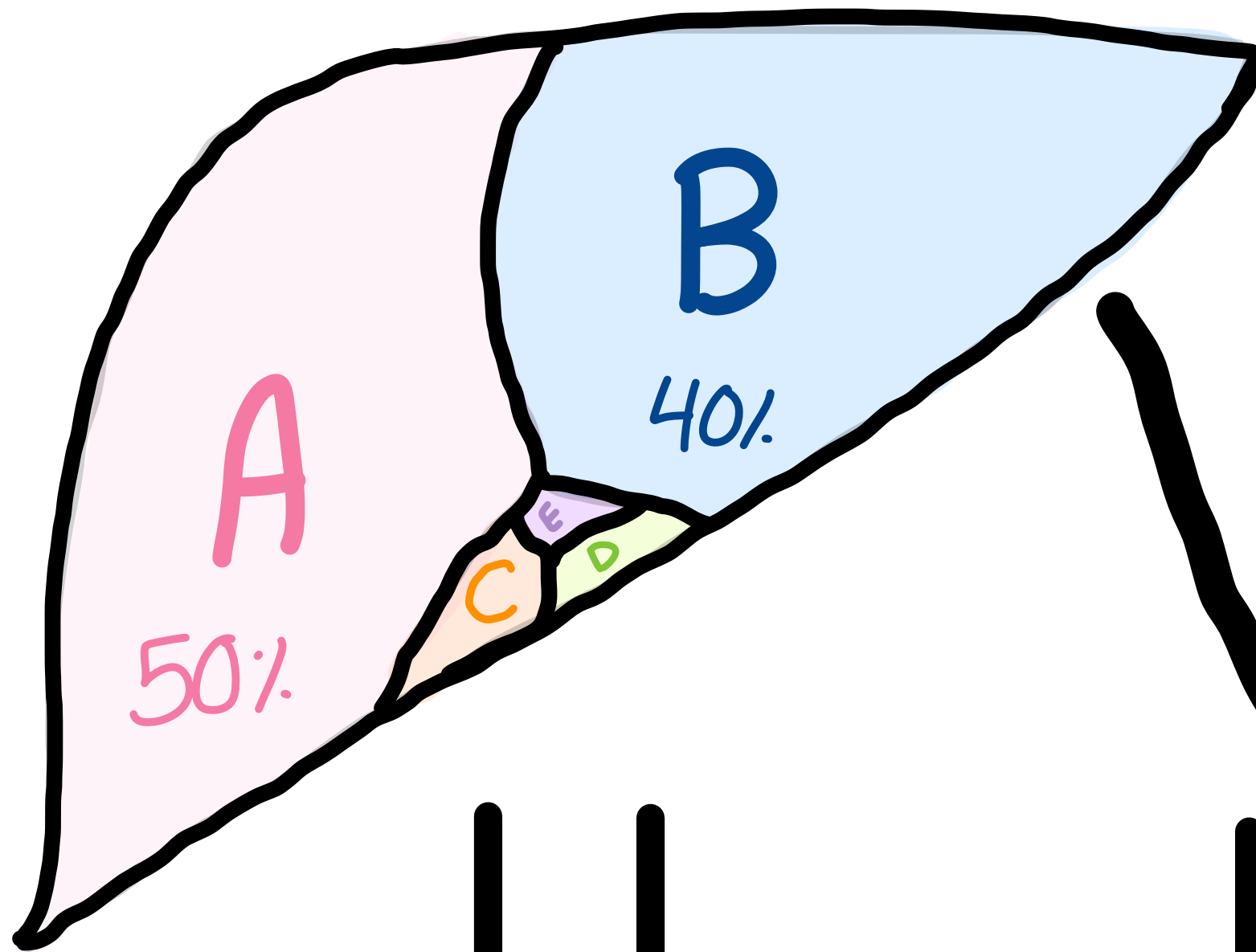


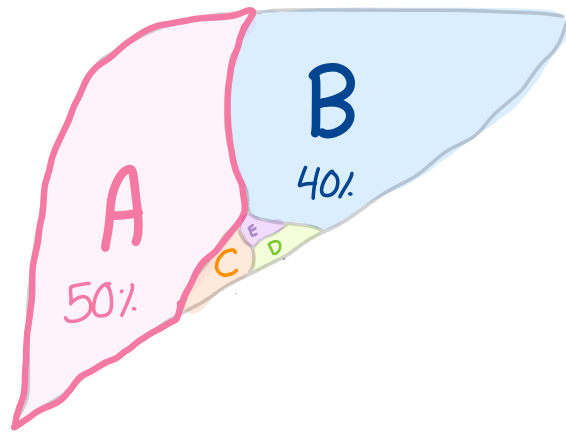


Viral Hepatitis

Mas NaFouKh ☺

Hepatitis A

enterovirus 72



Transmission



fecal-oral

Shedding

- 2 weeks before symp.
- 1 week Post Symp.

most Contagious

2 weeks before onset of Symptoms

Infective dose

< 100 particles

Incubation

2-6 weeks

Epidemiology



Age

Children

Disease

Inapparent - Productive

90% children

25-50% adults

Symptomatic

mostly in adults

! NO Chronic / Carrier

Clinical manifestation



Infectious Hepatitis

Pre-Icteric

flu-like

nausea

anorexia

vomiting

Icteric

fever

Abdominal pain

Hepatosplenomegaly

↑ ALT / AST

Clay-colored stool

Dark urine

Jaundice

Stool

EM

Blood

↑ ALT, AST

↑ ESR

↑ Bilirubin (mild)

• Leukopenia

• Relative lymphocytosis

IgM

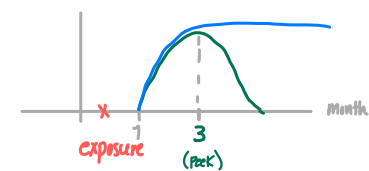
Acute

(3-6 months)

IgG

Past inf.

Vaccine



Treatment



- Acute

* Supportive (Resolve 2-4w)

↳ Hydration, Bed Rest

Avoid Alcohol

< 1% Fulminant Hep

↳ Liver transplantation

Immunization



Passive

Serum Globin

Short Term

Before / within
2 weeks of exposure

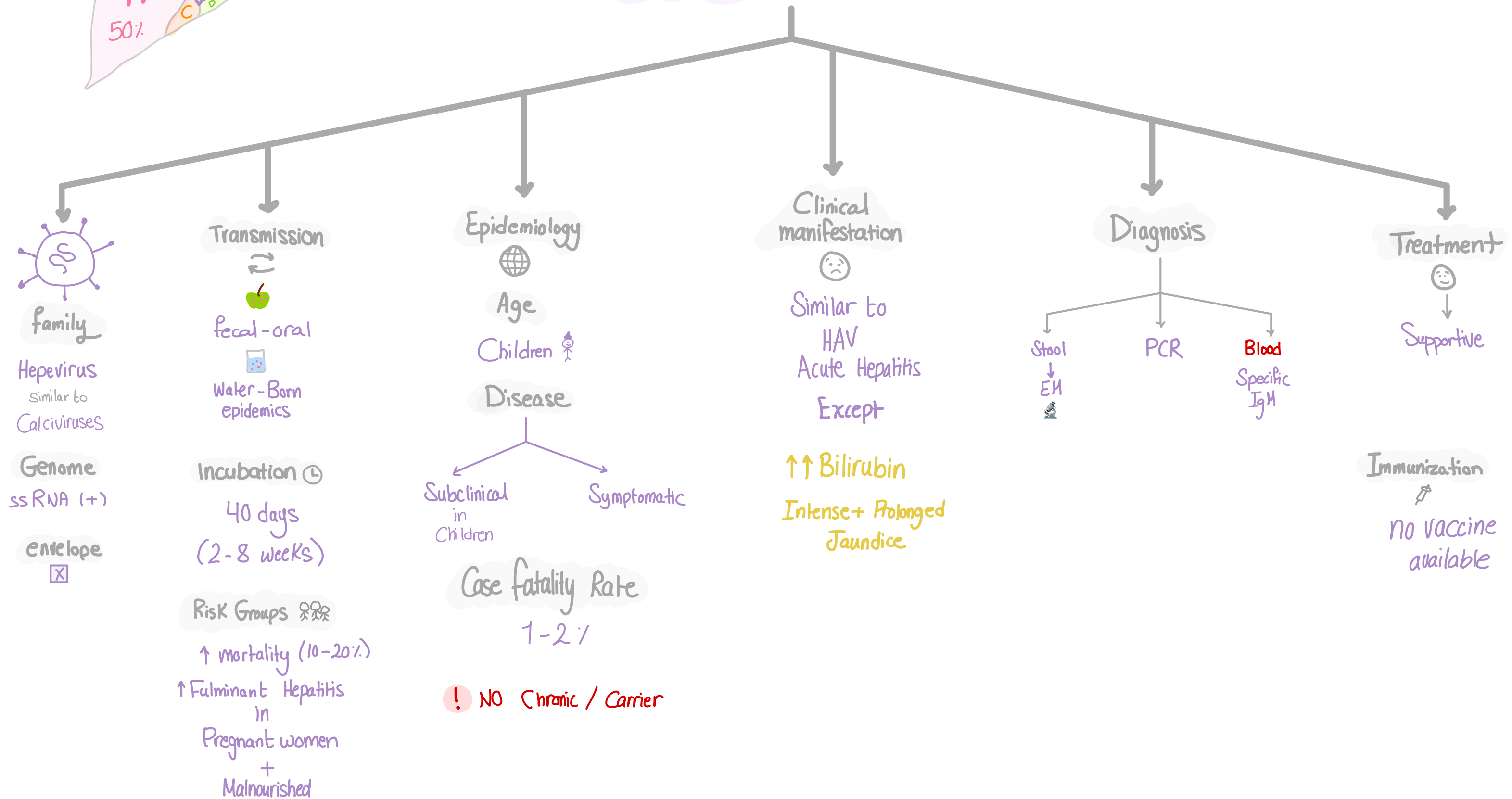
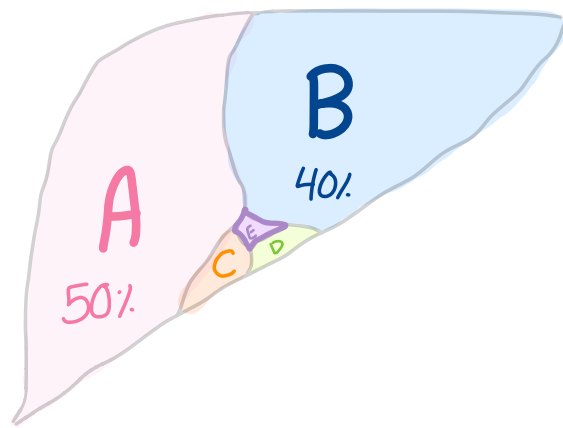
Active

Formalin Killed Vaccine

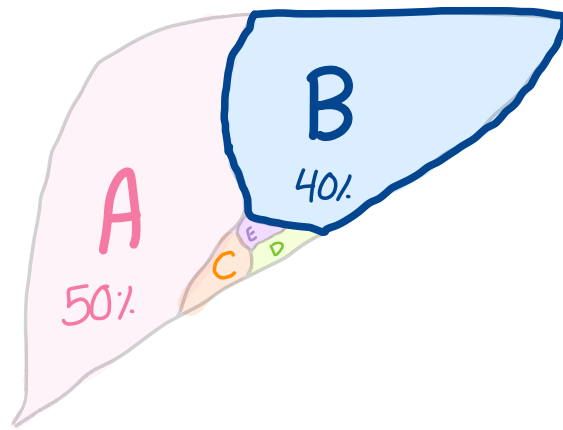
Long Term

IH
2 Doses

Hepatitis E



Hepatitis B



Family
Hepadnavirus

Genome
Partially dsDNA
(3200) nucleotides

envelope
☑

Serotypes
4

Transmission

Parenteral
IV

Vertical
mother → Baby

Body fluids
Semen Saliva

Risk Groups

medical Personnel
injection drug users
MSM
Blood Recipients
Dialysis Patients

Incubation

7-160 days
≈ 70 days

Epidemiology

Age
All ages

Disease

Acute 90%

Symp. non-Symp.

90% Children 25% Adults

Chronic 10%

Active 1/3 Passive 2/3

Hepatocellular carcinoma (25%)
Cirrhosis failure

• Chronic $\propto \frac{1}{\text{age}}$
neonates ≈ 90%

• with HDV = ↑ Fulminant Hepatitis

Clinical manifestation

Serum Hepatitis

Pre-Icteric

Flu-like

nausea anorexia malaise

Icteric

— Piecemeal Necrosis
— Abdominal pain
— ↑ ALT / AST
— Clay-colored Stool
— Dark Urine
— Jaundice

+ Early in the illness:

Frank Arthritis

Skin Rash

Antigen Anti Body Complex

Diagnosis

Biopsy
↓
Stage of Fibrosis

Serology

Antigens

S General (A/C)
e Active Rep + Infectivity

Antibodies

SAb Cured / Immune
cAb Stopped rep.
cAb IgM = Acute
IgG = Past inf. = Chronic

	S	e	C
	Ab	Ab	Ab
A	-	+	+
C	-	+	-
⌚	+	-	-
Prior window	+	+	+
	-	-	±

A: Acute
C: Chronic.

Treatment

Interferon α

Anti Virals

• Lamivudine (Resistance)
• TenoFovir
• Entecavir (AMP analog)

Immunization

Passive

HBIG

Post exposure within 48hrs
• neonates of infected mother
• Medical Personnel

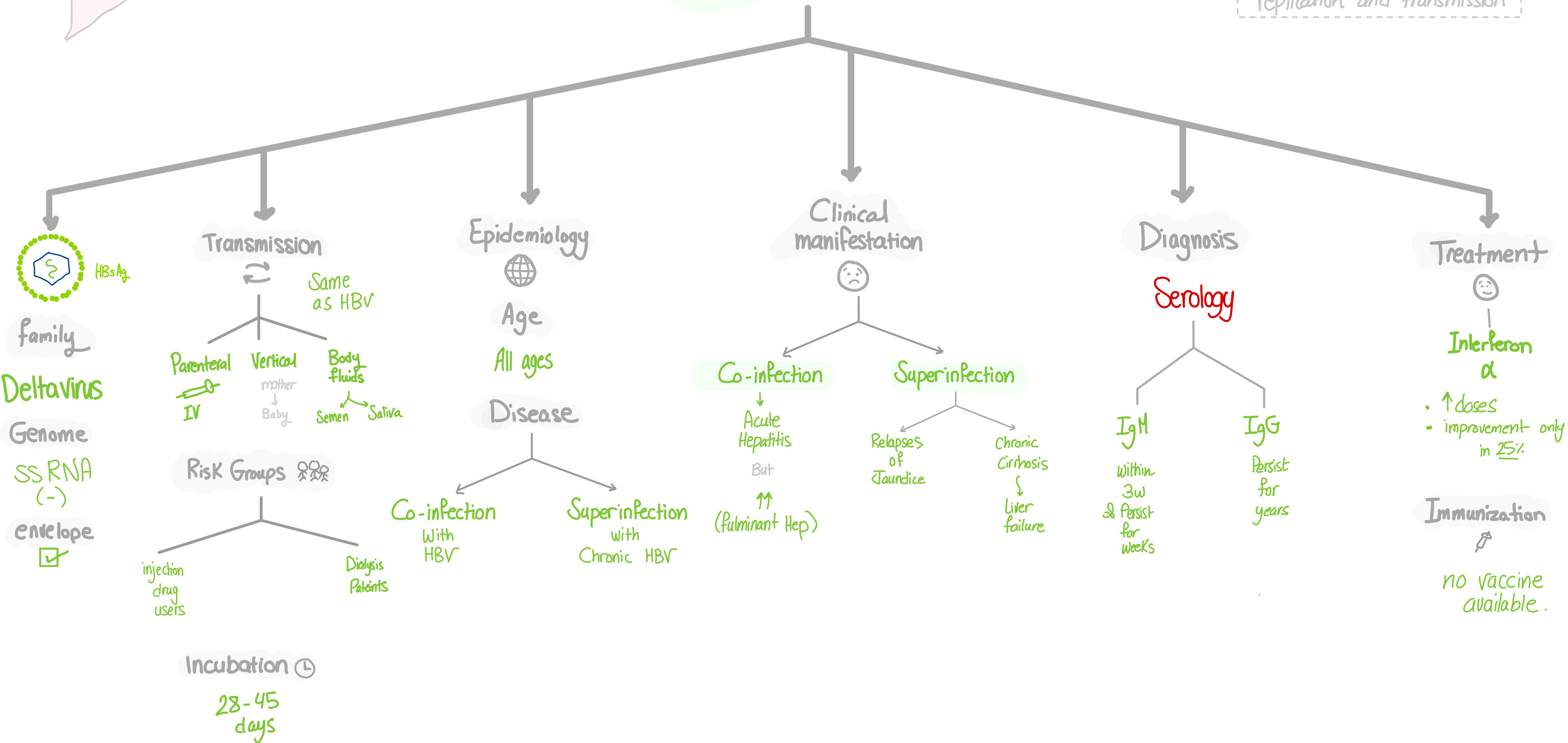
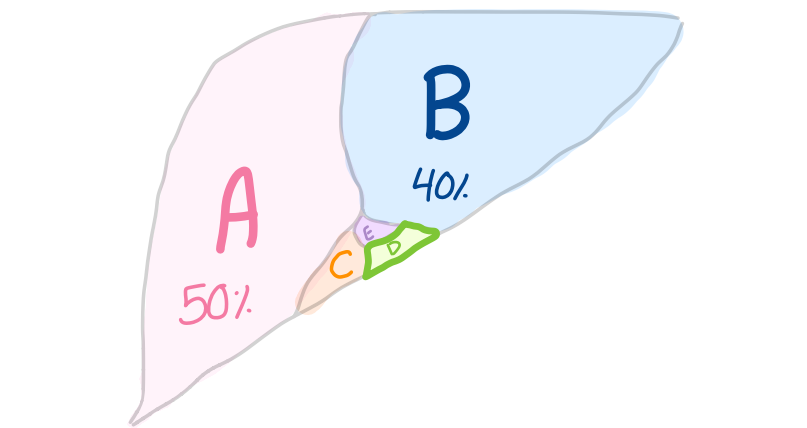
Active

Recombinant HBsAg

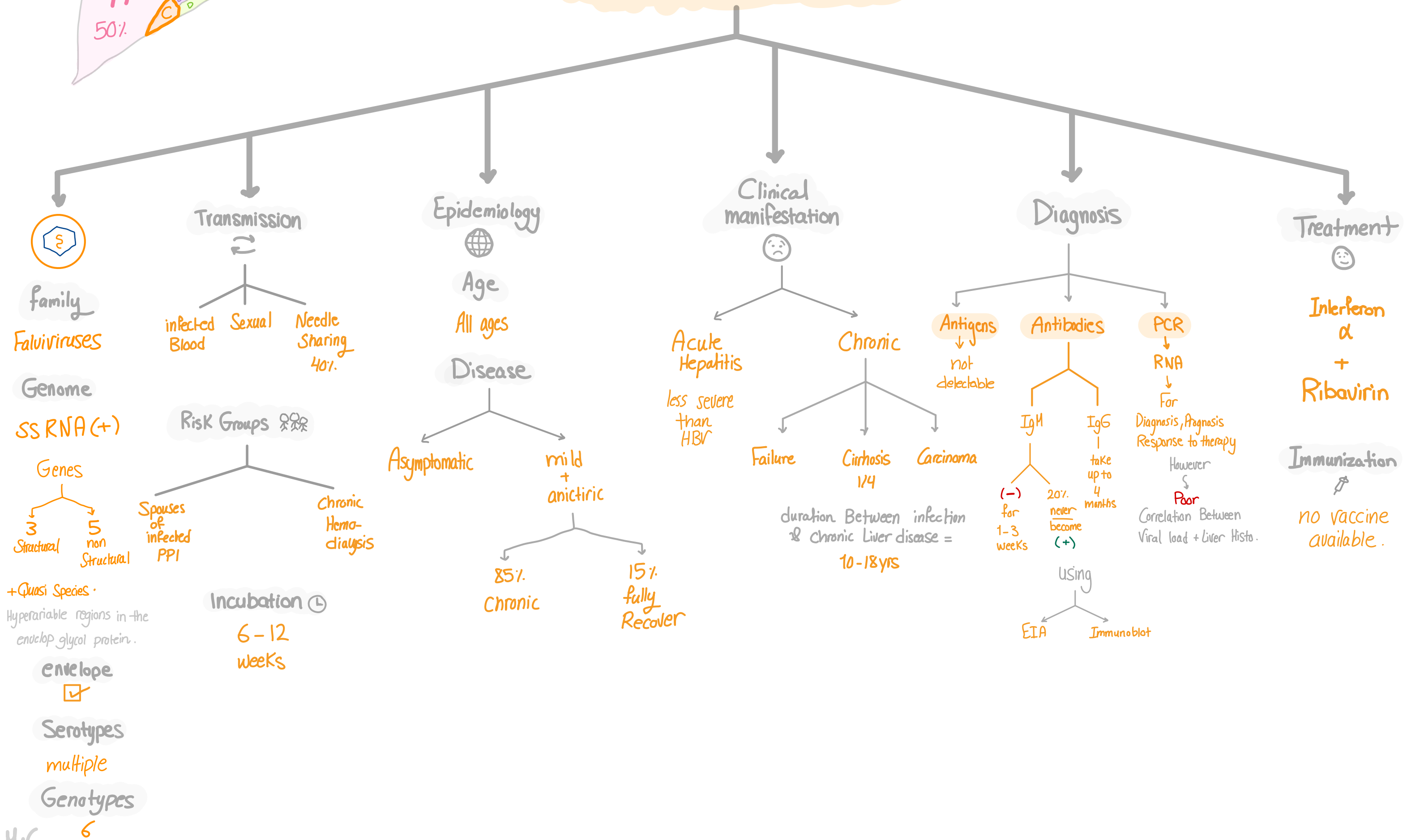
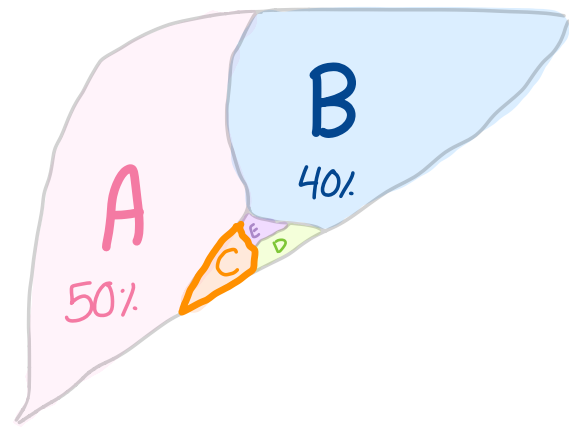
3 Doses, 1M > 10 IU/mL
• neonates in 10 (Hexaxime) (2, 3, 4 months)

Hepatitis D

Requires HBsAg for replication and transmission



Hepatitis C



اللهم اني اعوذ بك من الهم والحزن،
والعجز والكسل، و الجبن و البخل، واعوذ
بك من غلبة الدين و قهر الرجال.

اللهم

أعِنِ إخواننا في فلسطين، وارزقهم الصبر
والثبات، وانصرهم على من ظلمهم.

اللهم كن لهم عونًا وسندًا، واشفِ جراحهم،
وارحم شهداءهم، وفكِّ أسر أسراهم.

اللهم أنزل عليهم سكينتك، وأبدل خوفهم
أمنًا، وضعفهم قوة.
أنت حسبهم ونعم الوكيل.

Best
of
Luck!