



New Treatment for Chronic HBV Infection 慢性乙肝的新療法

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Objectives 學習目標

1. To review current treatment for chronic HBV infection

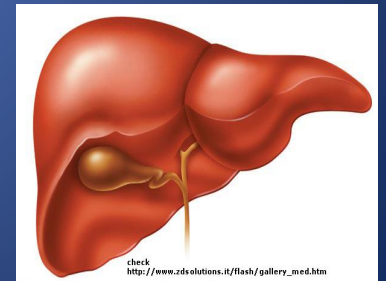
回顧目前對慢性乙肝感染的治療

2. To discuss advantages and disadvantages of current treatment options

討論目前治療的優點缺點

3. To discuss new treatment to cure HBV

討論治療乙肝的新方法



HBV Current Treatment

慢性乙肝當前治療



Advantages of HBV Therapy

HBV療法的優點

- HBV highly treatable in 2025 可高度治療
- All oral therapy 所有口服療法
- Easy to take 容易服用
- Very few side effects 副作用很少
- Long duration (many years)
持續治療時間長（很多年）
- Cost is much lower now 成本要低得多
- Newer treatment (cure) is coming
新型治療（治愈）即將到來

Disadvantages of HBV Therapy

HBV療法的缺點

- Long duration (many years) 長期服藥 (多年)
- High cost (many years) 高成本 (多年)
- Does not get rid of virus 不能完全消除病毒
- Very rarely cures patients with HBV
少數的情況下可以治癒乙型肝炎患者
- There is still a small risk of liver cancer
仍有小風險導致肝癌

目前對乙型肝炎的治療

Approved HBV Treatments

- Interferons (IFN)
 - Standard IFN alfa – 1992
 - Pegylated IFN alfa (Peg-IFN) - 2005
- Nucleos(t)ide analogues (NAs)
 - Lamivudine – 1998
 - Adefovir – 2002
 - **Entecavir (ETV) – 2005**
 - Telbivudine – 2006
 - **Tenofovir disoproxil fumarate (TDF) – 2008**
 - **Tenofovir alafenamide (TAF) - 2016**

Current Treatment for Chronic Hepatitis B

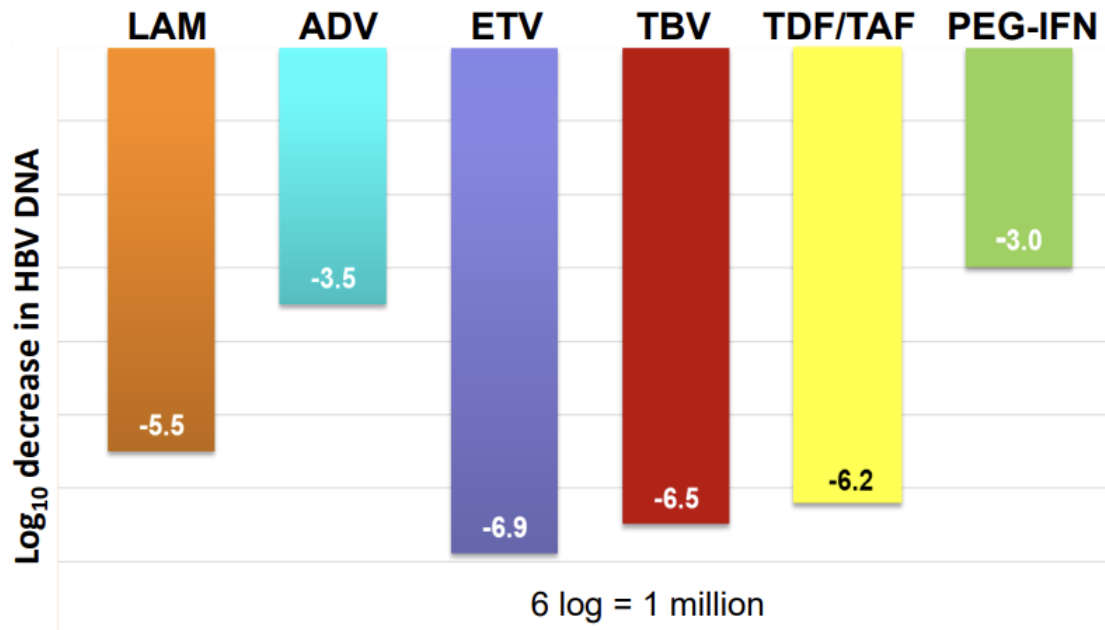
慢性乙型肝炎的治療

	<u>Interferon</u>	<u>Lamivudine</u>	<u>TAF</u>	<u>Entecavir</u>	<u>Tenofovir</u>
Route	注射	口服	口服	口服	口服
副作用	++	-	-	-	-
價格	++	-	+	-	-
耐藥性	沒有	常見	沒有	非常罕見	沒有
期間	1 年	很多年	很多年	很多年	很多年



一年內HBV DNA的減少

Decrease in Serum HBV DNA after 1 Year of Treatment

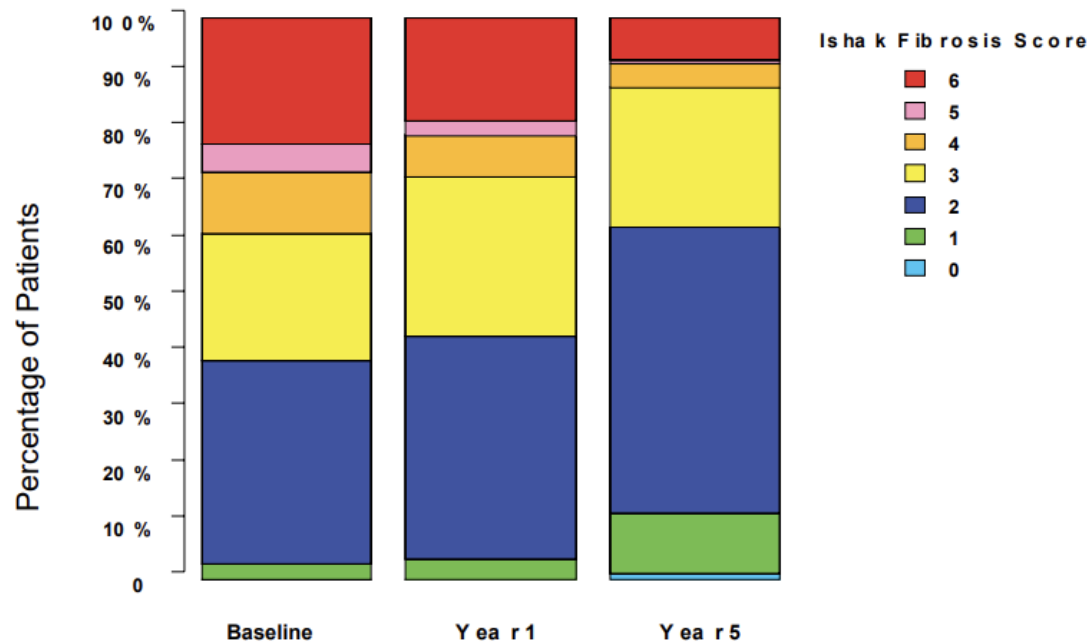


Not head-to-head comparison, results from various trials combined

LAM=lamivudine, ADV=adefovir, ETV=entecavir, TBV=telbivudine, TDF=tenofovir disoproxil fumarate, TAF=tenofovir alafenamide, PEG-IFN=peginterferon

纖維化和肝硬化的逆轉

Reversal of Fibrosis and Cirrhosis Tenofovir Phase III trial: biopsies at Year 0, 1 & 5

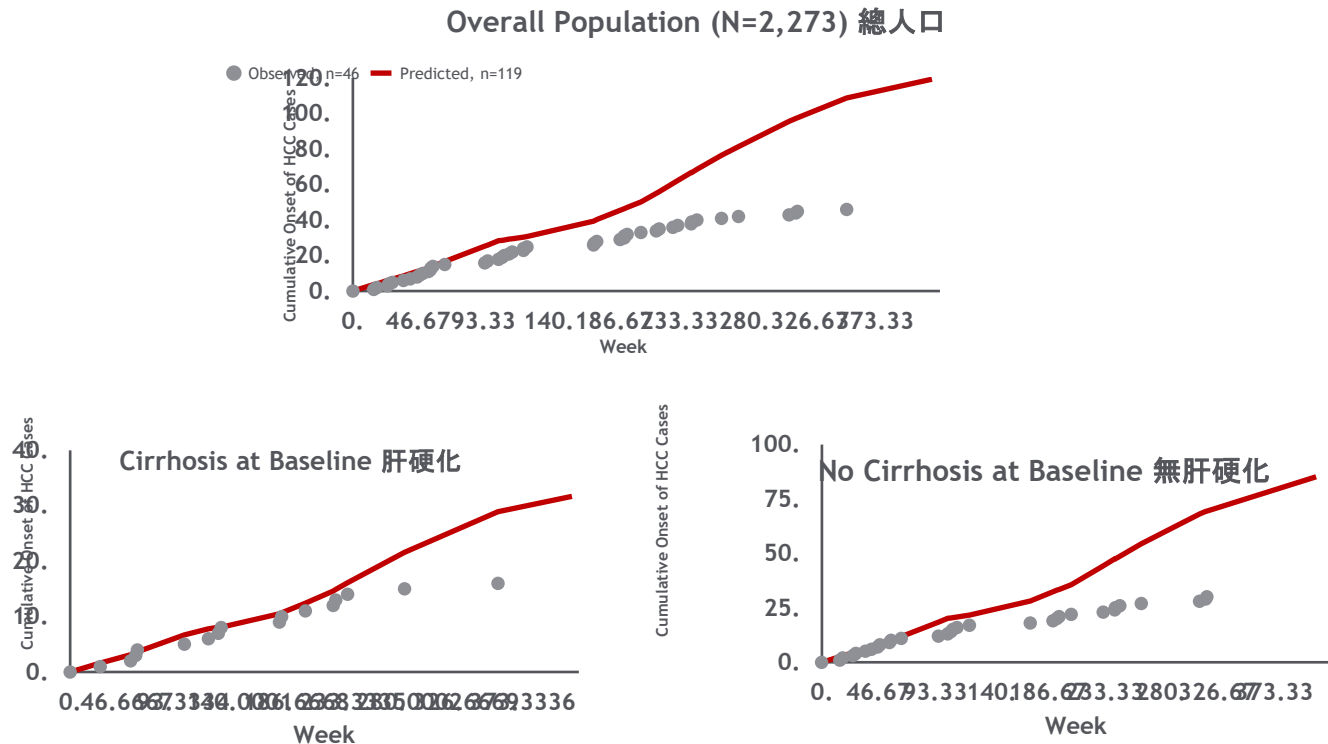


- 348/641 (54%) had liver biopsy at baseline and Year 5
- 71/96 (74%) with cirrhosis (Ishak Score ≥ 5) at baseline no longer had cirrhosis at Year 5



Tenofovir-based treatment reduced HCC incidence 替諾福韋的治療降低了肝癌的發病率

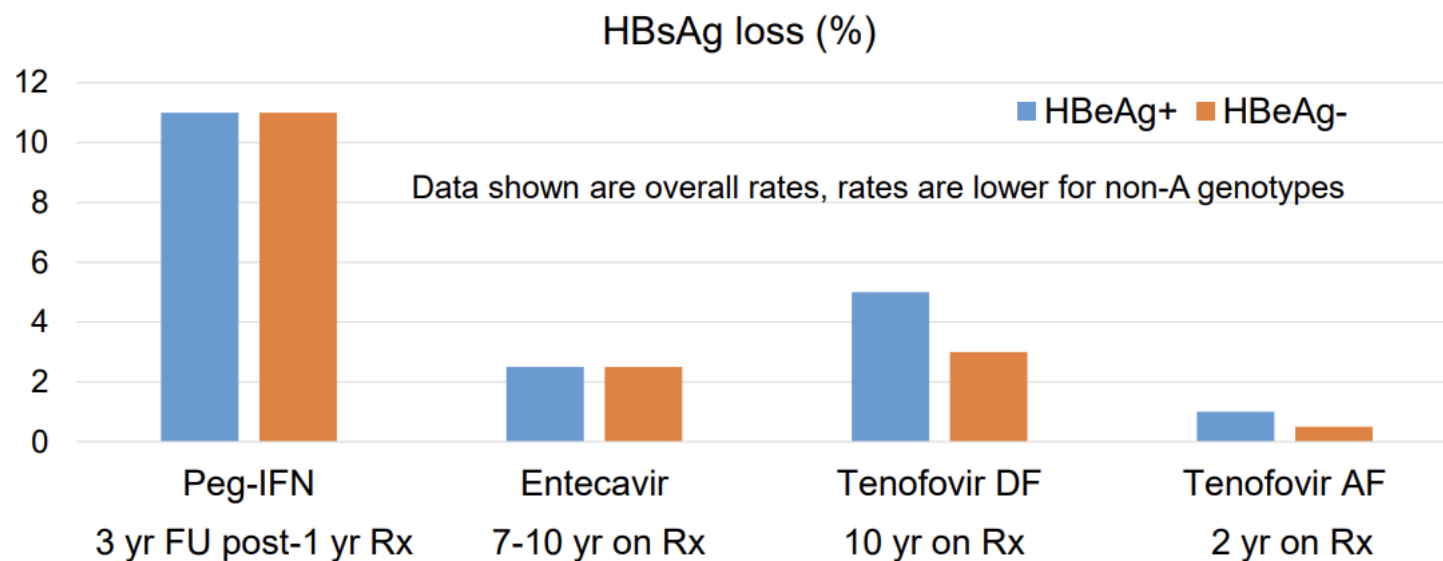
Observed vs. Predicted* HCC Cases 觀察與預測的肝癌病例



抗病毒治療降低肝癌風險

治療中的HBsAg血清陰性轉變率

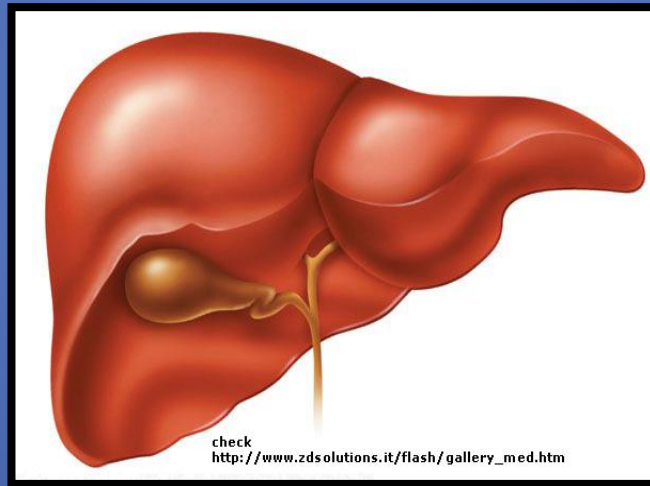
Rates of HBsAg Loss in Patients Treated with IFN or NA



Jeng WJ, Lok AS, Clin Gastroenterol Hepatol 2021; 19: 2006

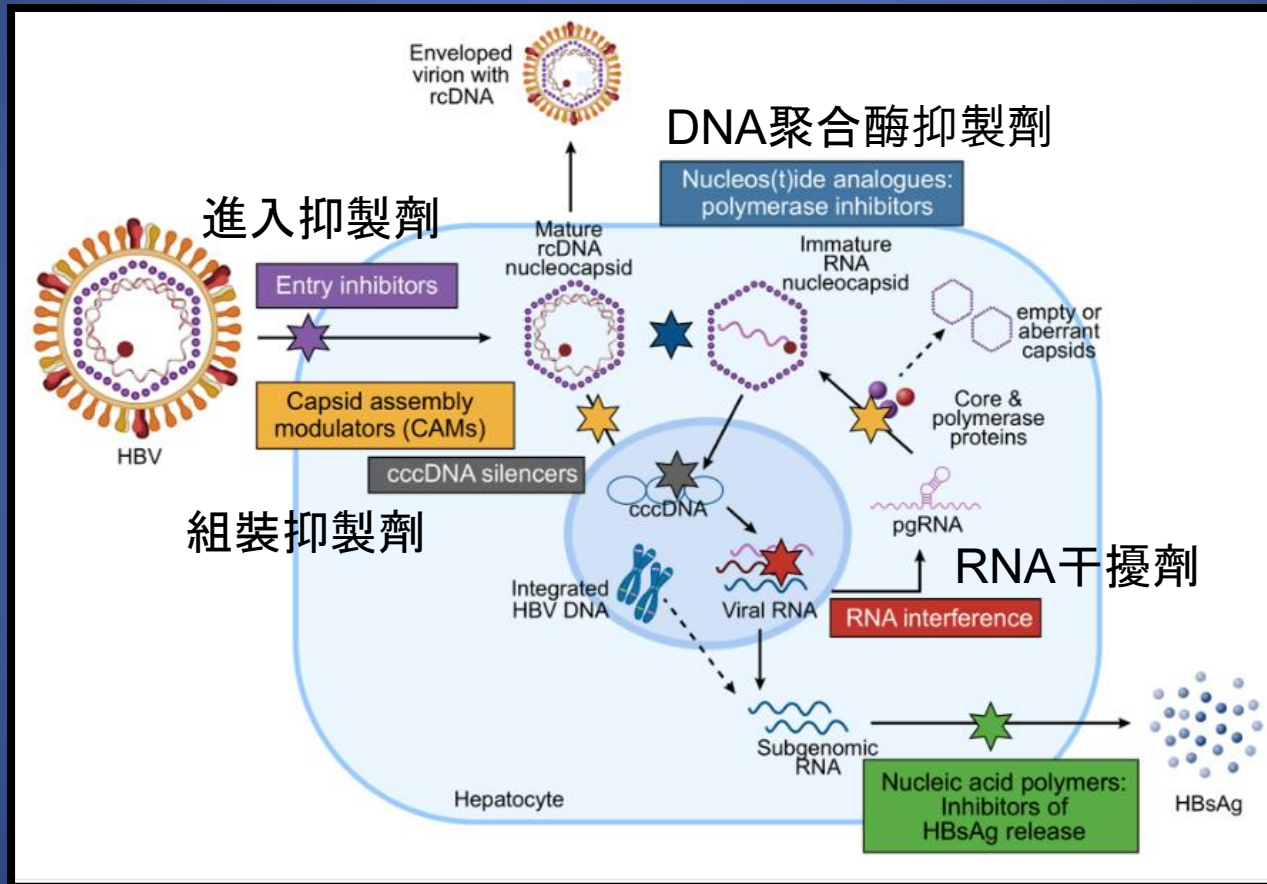
HBV Cure?

乙型肝炎可以治癒嗎？



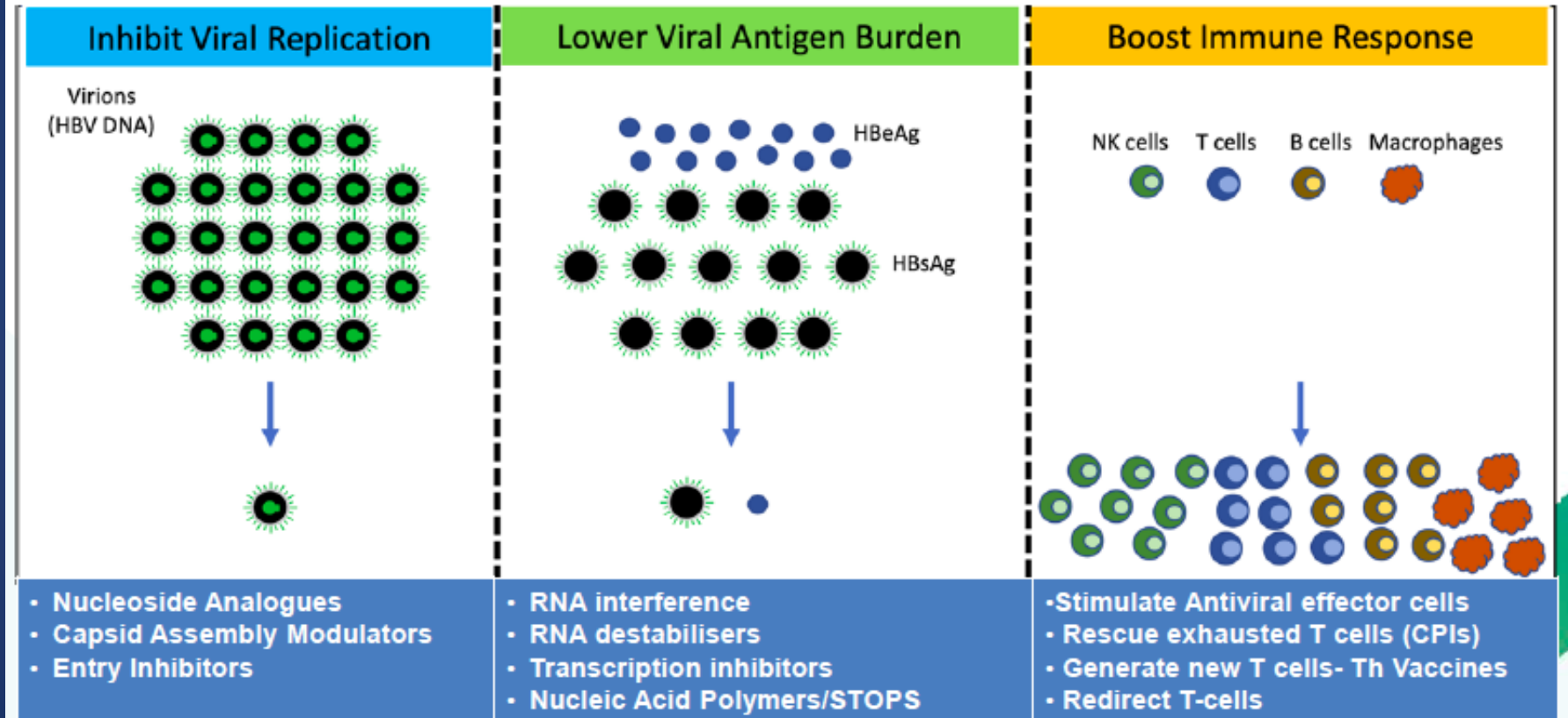
HBV Viral Targets

乙型肝炎病毒酶



新療法

Therapeutic Approaches to HBV Cure



抑制病毒複製

降低病毒抗原水準

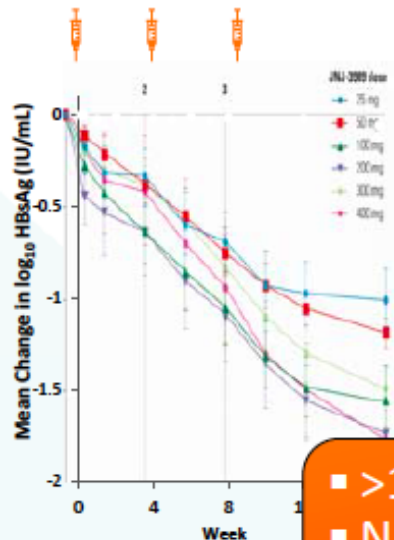
增強免疫系統

RNA干擾非常有效

siRNAs achieve potent on-treatment HBsAg responses

1. JNJ-3989/ARO-HBV

X and S triggers
3x monthly doses

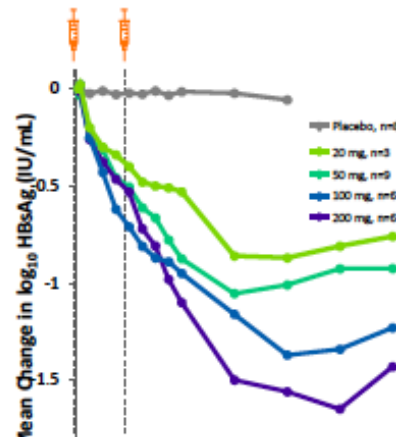


Gane E, et al. AASLD 2019 #0696
Gane E, et al. EASL dILC2020. #GS10



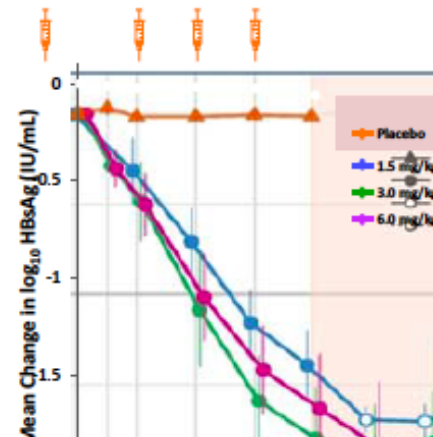
2. VIR-2218/ALN HBV02

Single X trigger
2x monthly doses



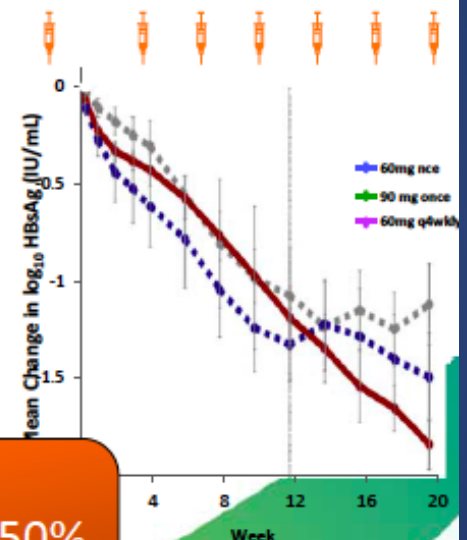
3. RG-6346/DCR-HBVS

Single S trigger
4x monthly doses



4. AB-729

Single X trigger
1-6x monthly doses



M-F, et al. AASLD TLMdX2020. #83

- >1 log HBsAg reduction achieved in 85-92%
- Nadir HBsAg level <100 IU/mL achieved in >50%

NB. Direct comparison between studies is not possible because of different doses, dosing intervals and patient populations

大多數患者的乙肝表面抗原水準大幅降低

數量有限的患者可以治癒

感謝您的光臨!

Thank You for
Your Attention!



有問題嗎？

Questions?

