

# Hepatitis B is a Treatable Disease!

Harry L.A. Janssen

Dept. of Gastroenterology & Hepatology  
Erasmus University Medical Center  
Rotterdam The Netherlands

**Erasmus MC**  
University Medical Center Rotterdam

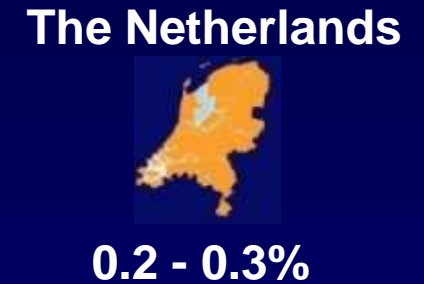
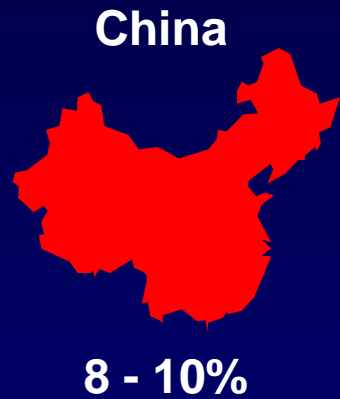


Hepatitis Summit Brussels  
October 2010

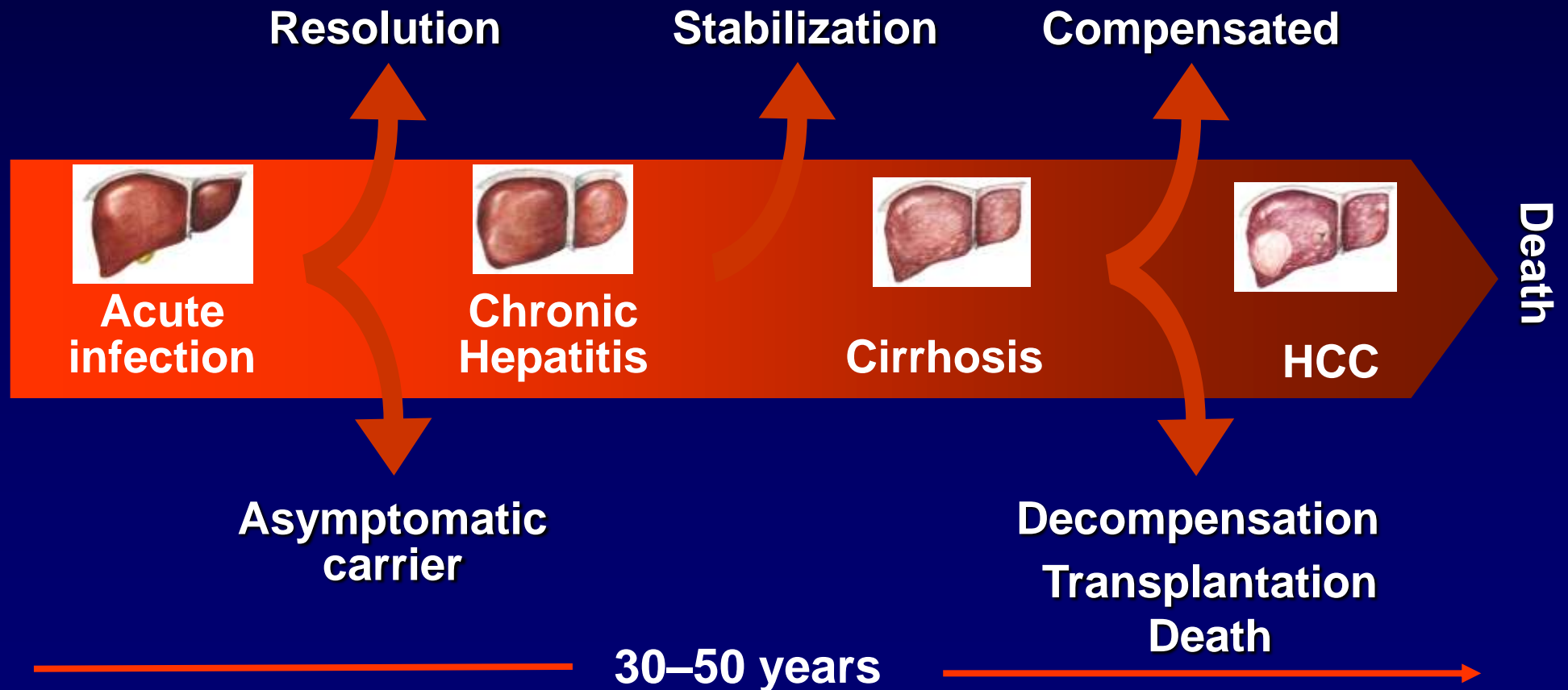


# Prevalence of Hepatitis B

## Role of Immigration in Europe



# HBV Disease: Silent Killer



# Hepatitis B

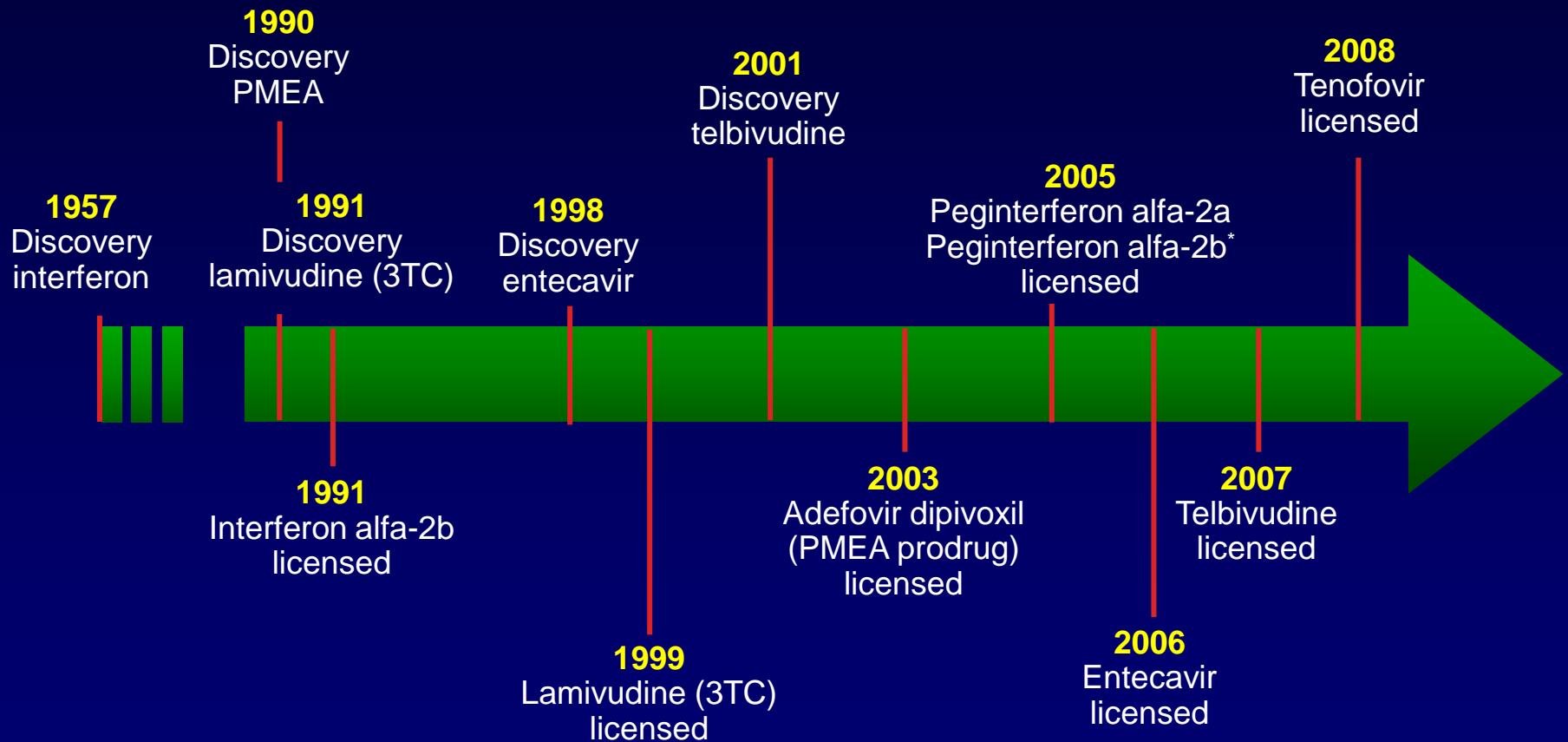
## under-diagnosed and under-treated

	Tested	Active
• Inflammation (ALT)	94%	28%
• Viral Load	68%	27%
• Treatment	-	4%

# Hepatitis B: 1990

A preventable  
disease!

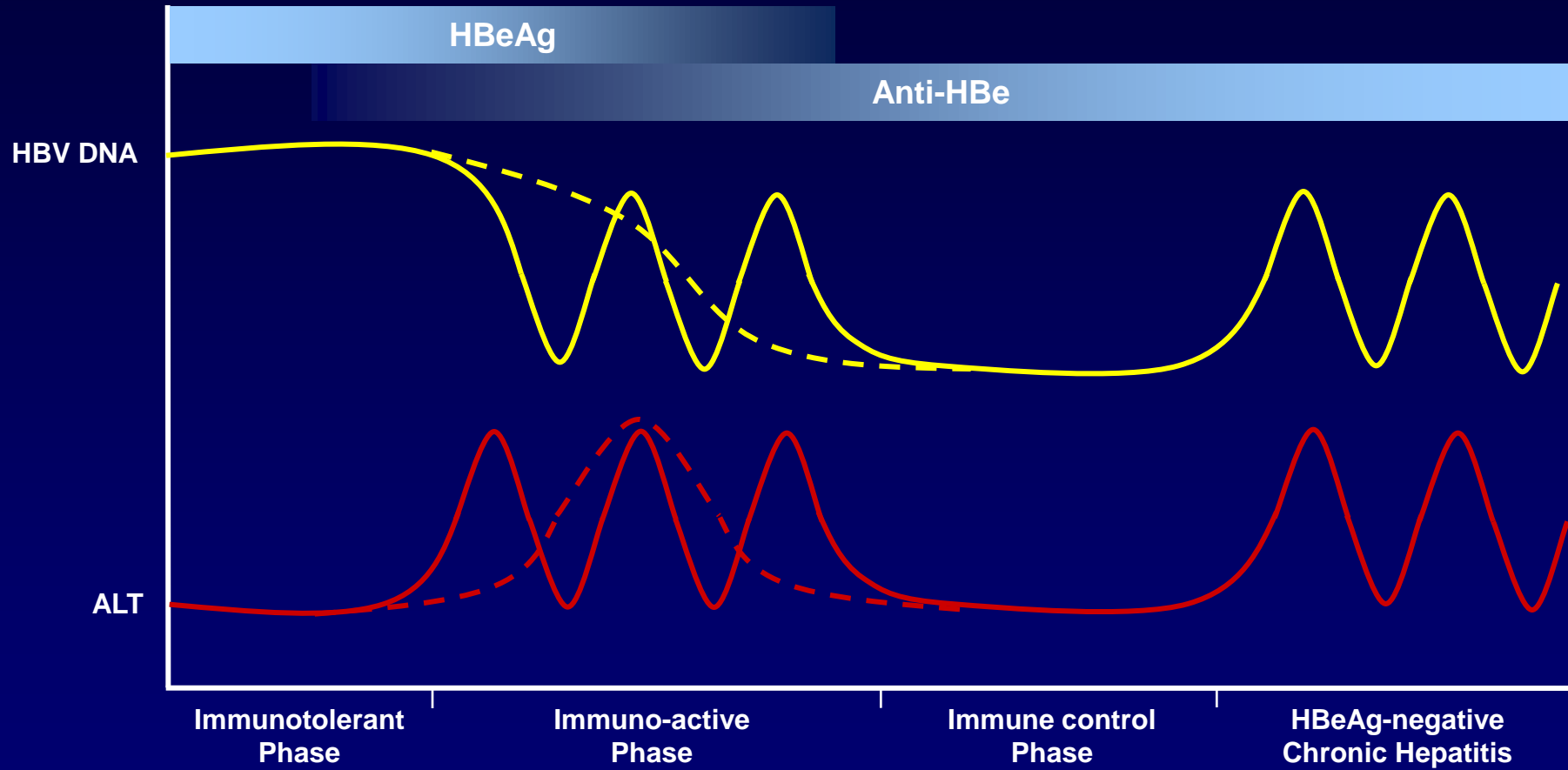
# Treatment of Hepatitis B 1990-2010



# Goals for treatment

- **Long-term clinical goals**
  - **Keep patient healthy for as long as possible**
  - **Prevent hepatic decompensation**
  - **Prevent progression to cirrhosis and liver cancer**
  - **Prolong survival**

# Phases Of Infection



Treatment indicated

Treatment indicated



# What end points are used?

- **HBeAg seroconversion**
- **Suppression in HBV DNA levels**
- **Histological improvement**
- **ALT normalization**
- **HBsAg seroconversion**
  
- **Studies have linked high HBV DNA levels with increased risk of:**
  - **Development of HCC and cirrhosis**
  - **Disease progression**

# Treatment Options

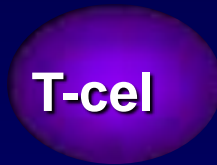
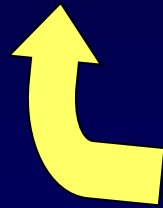
## Immuno-modulators

IFN $\alpha$

Peg IFN

Nx cytokines

Vaccine therapy



## Antivirals

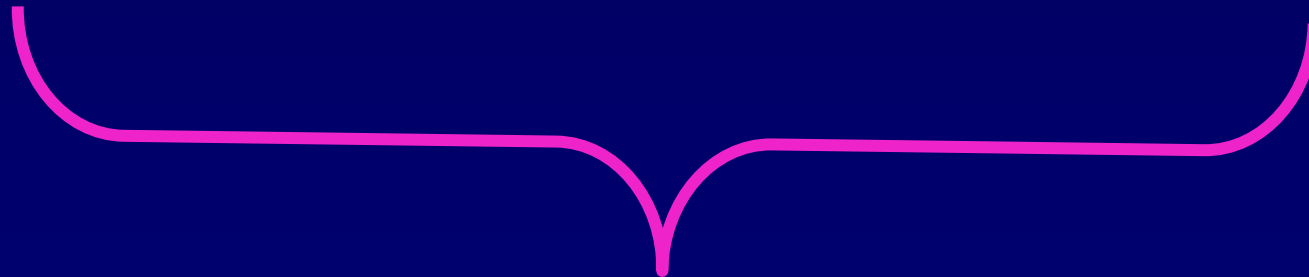
Lamivudine

Adefovir

Entecavir

Telbivudine

Emtricitabine



Treatment combinations

# Concepts of Treatment Goals in Hepatitis B

**Sustained response**

**=**

**No need for  
antiviral drugs**

**IMMUNE CONTROL**

**Pegylated  
Interferon**

**Maintained response**

**=**

**Continued need for  
antiviral drugs**

**VIRAL CONTROL**

**Nucleos(t)ide  
Analogues**

# Concepts of Treatment Goals in Hepatitis B

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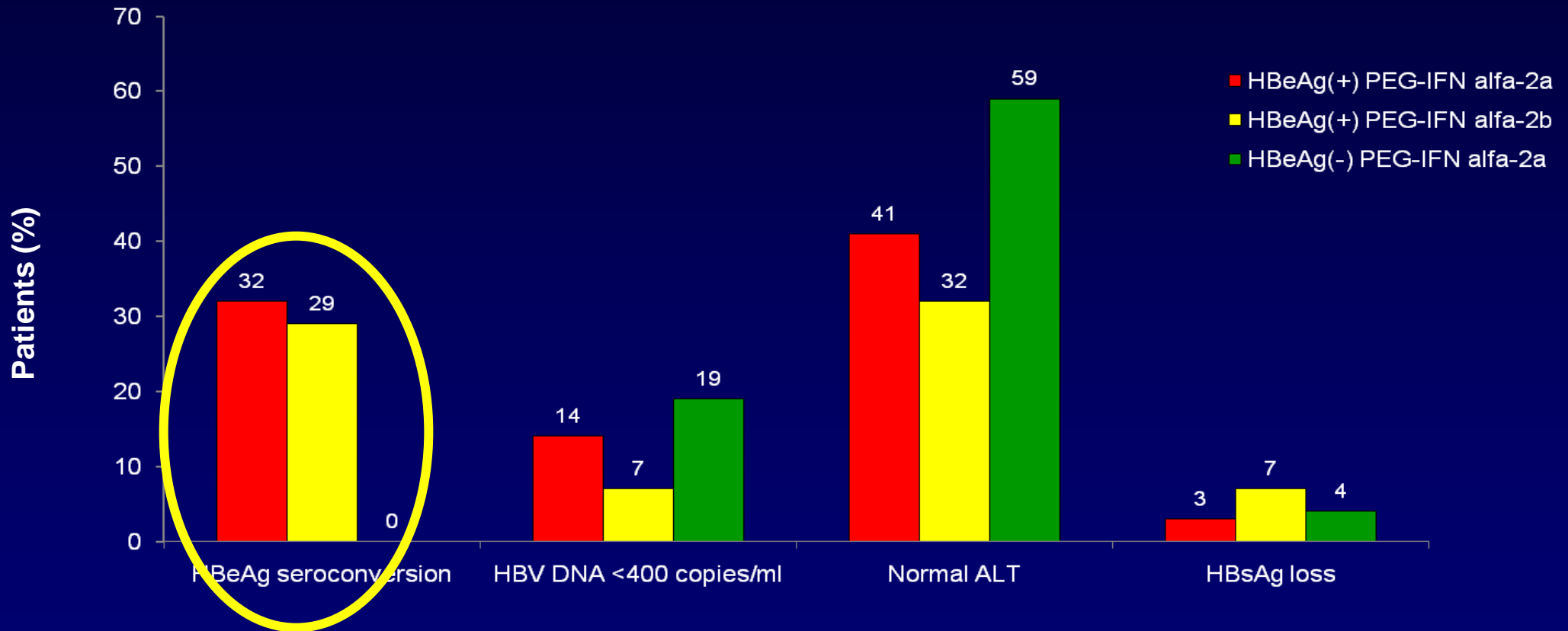
**=**

**Continued need for  
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**VIRAL CONTROL**

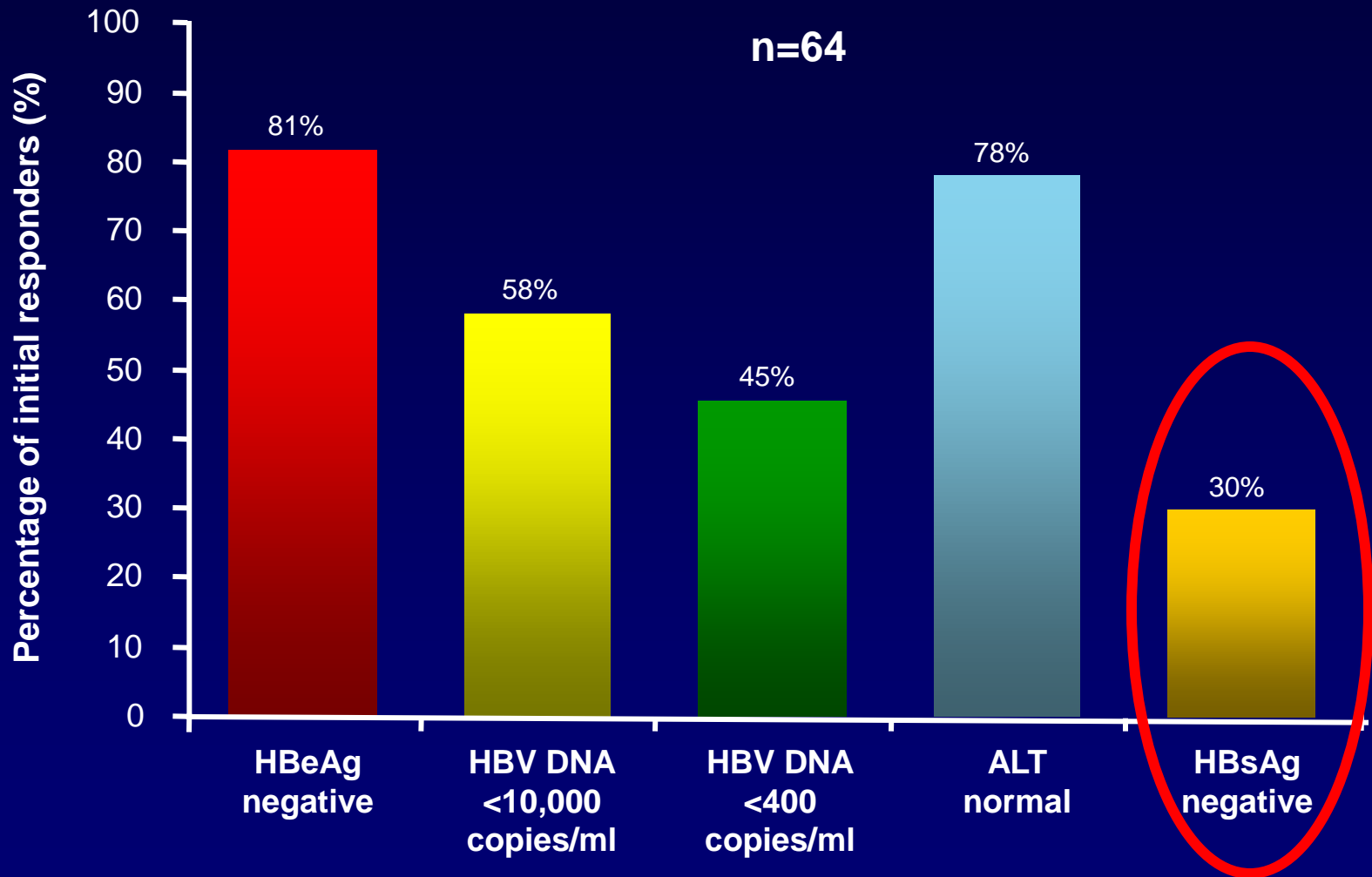
**Nucleos(t)ide  
Analogues**

# Response to PEG-IFN 6 months post treatment



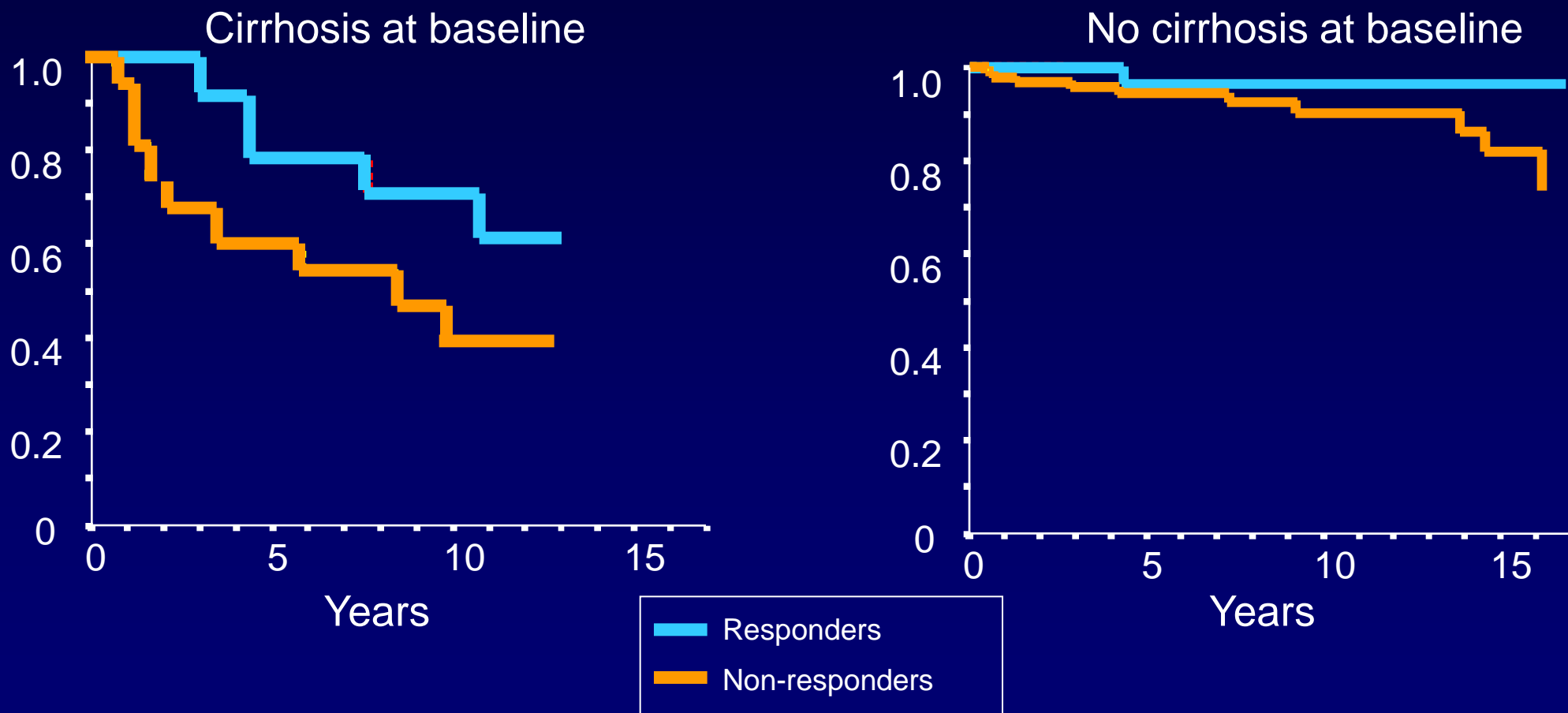
Treatment duration 48 weeks

# Follow-up of PEG-IFN $\alpha$ -2b in HBeAg (+) CHB: 3 years post-treatment among HBeAg responders



# IFN $\alpha$ -2b Treatment is Associated with Prolonged Survival

Proportion of patients surviving



# Concepts of Treatment Goals in Hepatitis B

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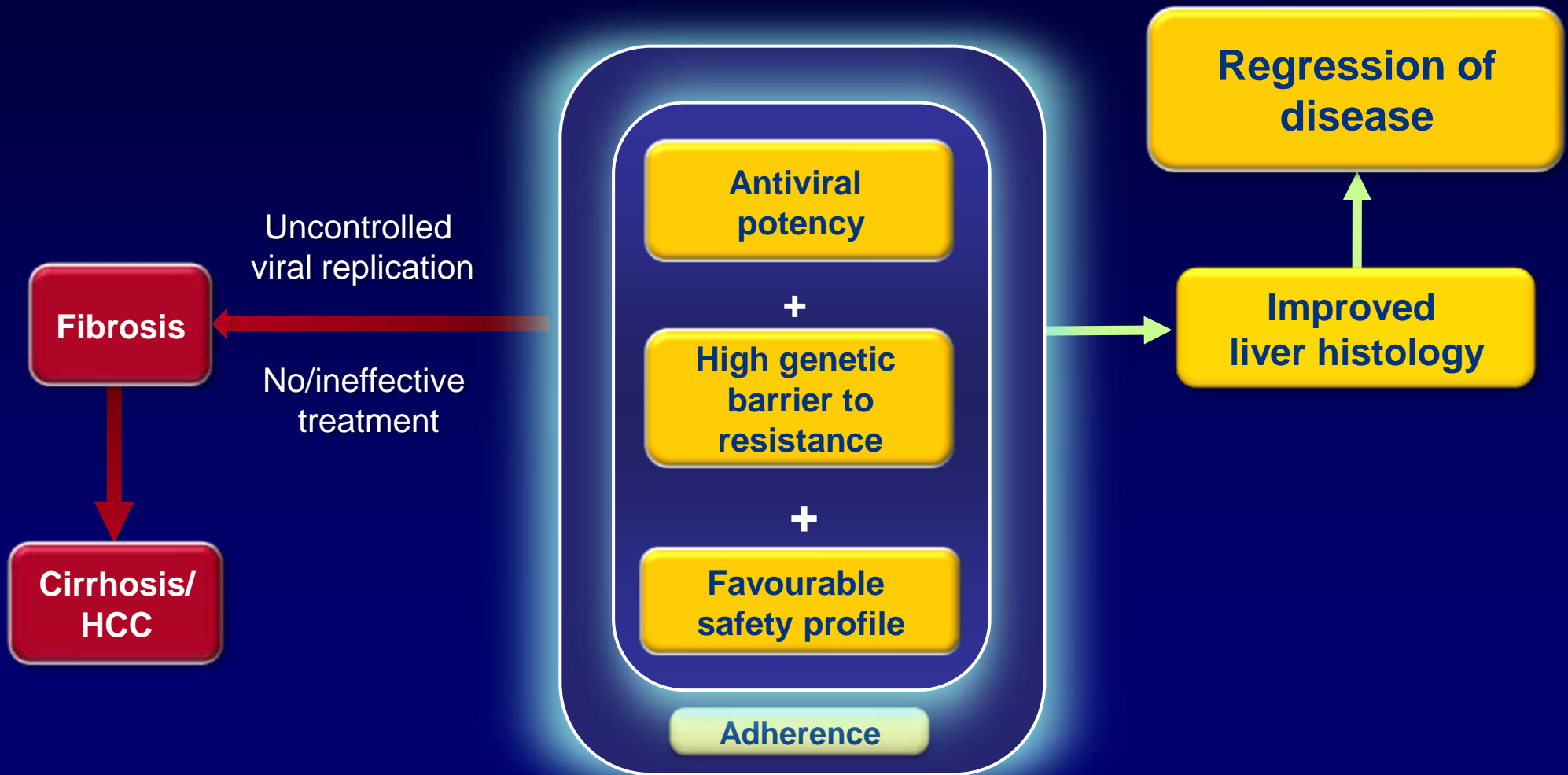
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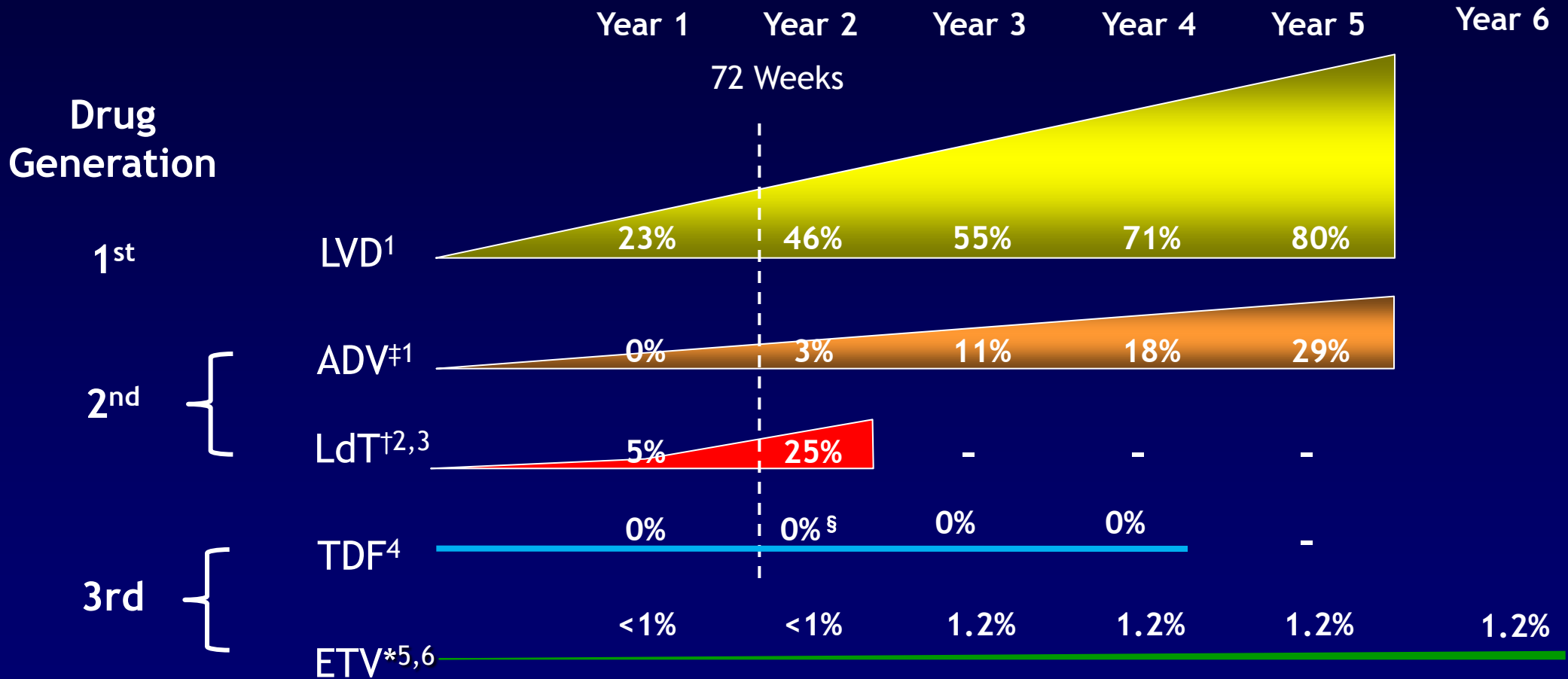
**Nucleos(t)ide  
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# Improving the long-term health of HBV patients with NA rests on these pillars

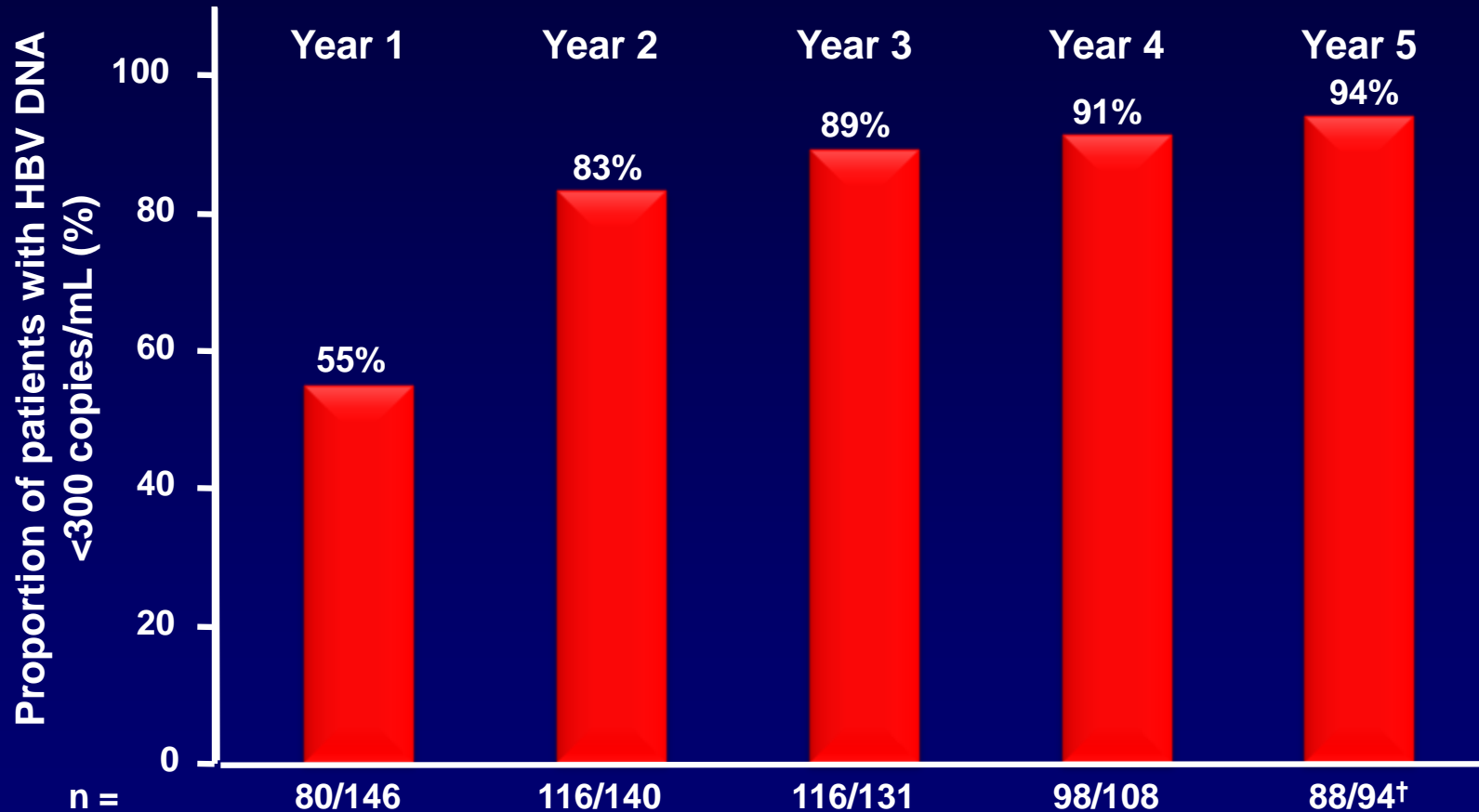


# Resistance rates through 6 years among nucleos(t)ide-naïve patients

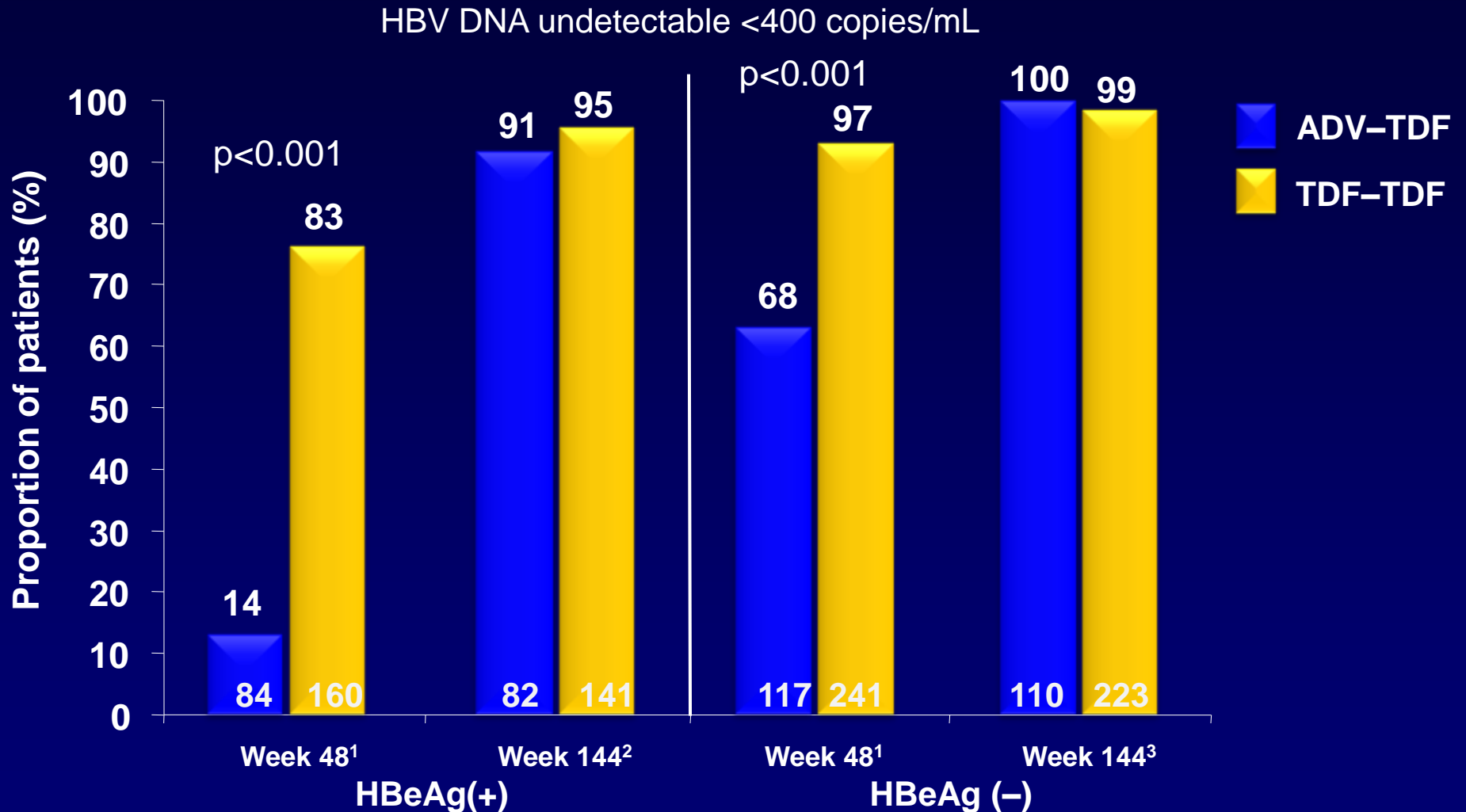


# Entecavir 5-year efficacy data

HBeAg(+) ETV long-term cohort (ETV-022→ETV-901)



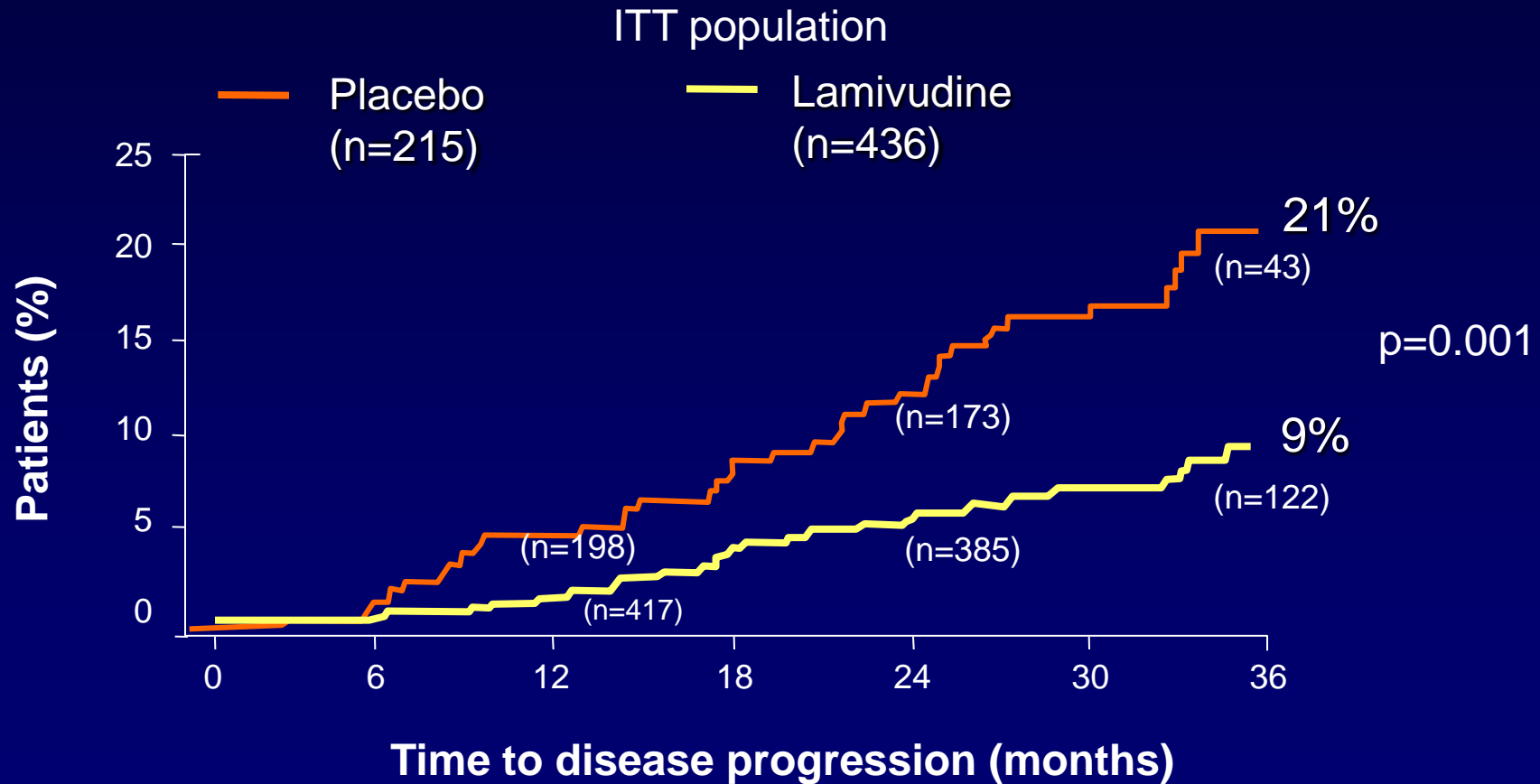
# Tenofovir 3-year efficacy data



Adapted from 1. Marcellin P et al. N Engl J Med 2008;359:2442–55. 2. Heathcote EJ et al. 60th AASLD Oct 30–Nov 3, 2009; Boston, USA. Poster 483. Available at [http://www.natap.org/2009/AASLD/AASLD\\_35.htm](http://www.natap.org/2009/AASLD/AASLD_35.htm). (Accessed April 2010). 3. Marcellin P et al. 60th AASLD Oct 30–Nov 3, 2009, Boston, USA. Poster 481. Available at [http://www.natap.org/2009/AASLD/AASLD\\_36.htm](http://www.natap.org/2009/AASLD/AASLD_36.htm) (Accessed April 2010).

# Antiviral treatment delays disease progression

Patients with CHB and cirrhosis or advanced fibrosis



# Who Should be Treated and With What? PEG-IFN or Nucleoside Analogues?

## Balancing the facts

### Benefits

Likelihood of  
sustained response

Severity of  
liver disease

### Risks

Side effects

Drug resistance

Patient's age  
Host genetics  
HBV genotype  
Patient's preference  
Co-morbid illness  
Costs

# Conclusions

- **Major improvement in HBV therapy in last decades!**
- **Choice of therapy depends on individual patient characteristics: PEG-IFN in selected proportion of patients**
- **Choose most potent NA with highest genetic barrier**
- **Therapy with NA may be indefinite in many patients**
- **More than 95% of HBV in remission with current drugs**

# Issues for the Future

- **Safety & efficacy of longterm therapy**
- **Response prediction: individualized therapy**
- **Role of combination therapy**
- **How to induce long-term cure (HBsAg loss)**
- **New agents with different sites of action**



# **Hepatitis B: 2010**

**A treatable  
disease!**