Clinical Perspective on HBV Cure Research

George V. Papatheodoridis
Professor in Medicine & Gastroenterology
Medical School of National & Kapodistrian University of Athens

Director of Academic Department of Gastroenterology,
General Hospital of Athens “Laiko”,
Athens, Greece
Do we need HBV cure?
Advances in HBV treatment

- **1957**: Discovery interferon
- **1990**: Discovery PMEA
- **1991**: Discovery lamivudine (3TC), interferon alfa-2b licensed
- **1999**: Lamivudine (3TC) licensed
- **2001**: Discovery telbivudine
- **2003**: Adefovir dipivoxil (PMEA prodrug) licensed
- **2005**: Peginterferon alfa-2a, Peginterferon alfa-2b* licensed
- **2007**: Telbivudine licensed
- **2008**: Tenofovir DF licensed
- **2006**: Entecavir licensed
- **2009**: Tenofovir alafenamide (TAF) licensed

* Specific countries only

Adapted from: ClinicalCareOptions.com
HBV-RELATED CHRONIC LIVER DISEASE
Groups of treatment options

(Peg)-IFNa
(antiviral+ immunomodulator)

ETV, TDF, TAF
TBV, LAM, ADV
(pure antivirals)
ETV, TDF, TAF long-term monotherapy
The treatment option used by the majority of CHB patients

- Viral suppression in 94-99% in per protocol analysis after 5-8 years of therapy
- Resistance 0% for TDF and TAF and 1.4% for ETV. Cross resistance ETV for LAM treated patients.
- Generally very safe after use in clinical practice for more than a decade
- Histological improvement, often reversion of pre-existing cirrhosis
- Reduction, but not elimination of HCC risk
- Improved overall survival, particularly in patients without cirrhosis
Good current treatment options
Why do we need to try for HBV cure?

➢ No HBV cure
  • Treatment only in patients with active liver disease (chronic hepatitis B)
  • Residual HCC risk
  • Rare HBsAg clearance
  • High relapse rates after treatment discontinuation

➢ Persistent HBsAg positivity
  • Physical, emotional, professional, social impact
  • Stress, stigma, discrimination
HBsAg seroclearance further reduces HCC risk after complete viral suppression with NAs
Anticipated positive effects of (functional) HBV cure

➢ HBsAg clearance

• Finite treatment duration
• Reduction (almost elimination) of HCC risk
• Expanding treatment indications
• Favorable effects on any HBV impact, stress, stigma, discrimination
• Decreasing HBV underdiagnosis rates
• Decreasing barriers to treatment