

# Hepatitis B Antiviral Drug Resistance: Navigating the Way Forward

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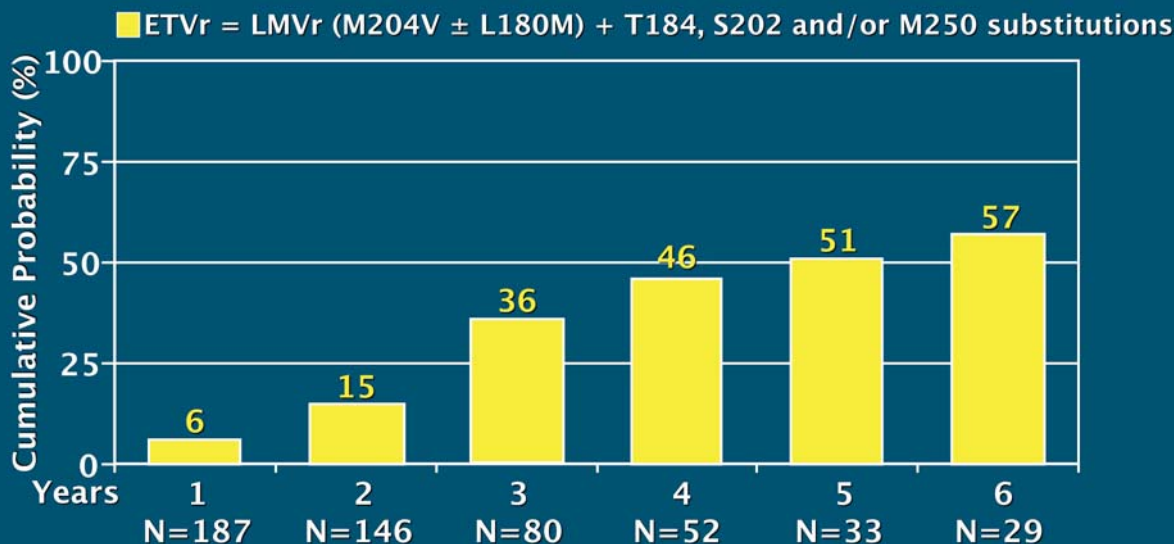
# Antiviral Drug Resistance Pathways

# Common Pathways of Antiviral Resistance in CHB: Cross-Resistance

Pathway	Resistance Substitutions	Antiviral Agent	Cross Resistance Profile			
			L-NA	ADV	TDF	ETV
L-Nucleoside (L-NA)	rtM204V/I	Lamivudine (LMV) Emtricitabine (FTC) Telbivudine (LdT)	R	S	S	I
Acyclic Phosphonate	rtN236T	Adefovir (ADV) Tenofovir (TDF)	S	R	I	S
"Shared"	rtA181T	L-Nucleoside Acyclic Phosphonate	R	R	I	S
Naïve Entecavir Resistance	rtL180M+rtM204V with one of rtT184, S202 or M250	Entecavir (ETV)	R	S	S	R
Multi Drug Resistance	Complex patterns e.g. rtA181T+rtI239V+ rtN236T+rtM250L	Multi-Drug	* consult reference laboratory * Role of IFN- $\alpha$			

R = Resistance; S = Sensitive; I = Intermediate

# LMV-Refractory Cohort (HBeAg[+]): Cumulative Probability of Entecavir Resistance Through 6 Years



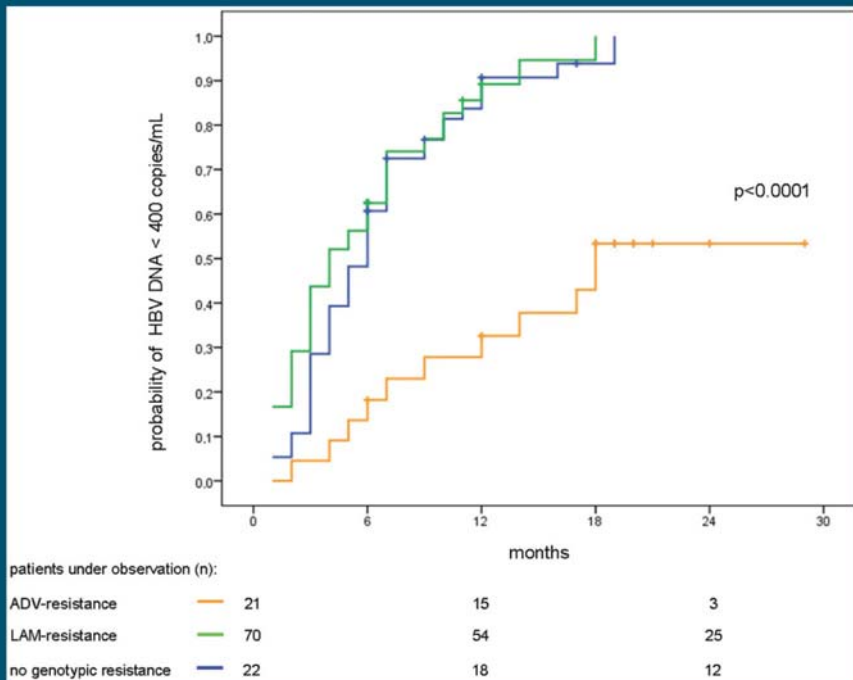
74/187 (40%) achieved HBV DNA <300 copies/mL

5/74 (7%) with HBV DNA < 300 c/mL had subsequent genotypic Entecavir resistance

Majority of patients in this cohort had confirmed baseline LMVr

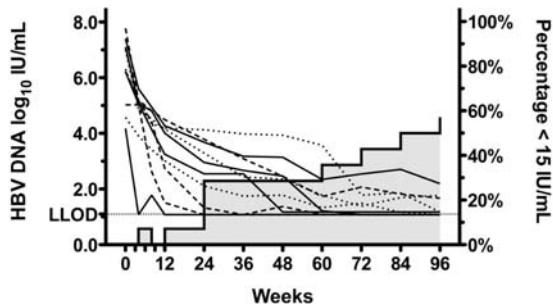
# Probability of Achieving Complete Virologic Response Under TDF Monotherapy

(HBV DNA levels <400 copies/ml)



# Tenofovir Rescue Therapy

rtA181T/V without rtN236T (n=10)



rtN236T patients (n=7, 3 alone, 4 with rtA181T/V)

