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**Question:** Should Antiretroviral therapy be used early for HIV and Hepatitis B co-infected individuals > 5 years old?

**Settings:** Multiple

**Bibliography:** There are no trials comparing early initiation of HAART (based on either CD4 or WHO Clinical stage) compared with late (CD4<200 or WHO Stage 4) initiation of HAART. The recommendations to initiate HAART early are based on theoretical considerations and indirect data: 1) Observation of faster progression to liver disease in HIV-HBV co-infected individuals than mono-infected persons (Thio CL, Seaberg EC, Skolasky RL et al. HIV-1, hepatitis B virus, and risk of liver-related mortality in the Multi-Center AIDS Cohort Study (MACS). Lancet 2002;360:1921-26) 2) Hoffman and colleagues observed that HAART initiation in co-infected persons did not affect treatment response for HIV but individuals remained at high risk for LRD, possibly due to incomplete HBV suppression. (Hoffman CJ, Charalambous S, Martin DJ et al. Hepatitis B virus infection and response to antiretroviral therapy (ART) in a South African ART Program. Clin Infect Dis 2009;47:1479-85). This led these authors and Jain (Jain M. Mortality in patients coinfecting with hepatitis B virus and HIV: could antiretroviral therapy make a difference? Clin Infect Dis 2009;48:1772-4) to postulate that with earlier and more effective (combination) antiHBV therapy, liver mortality would decrease. 3) Recent data suggests the importance of HIV in the fibrogenic process through the binding of gp120 to CCR5 receptors of hepatic stellate cells thus triggering an increased expression of collagen and inflammatory chemokines (Marra F, Bruno R, Galastri . gp120 induces directional migration of human hepatic stellate cells: a link between HIV infection and liver fibrogenesis. Hepatology 2007;46:Abstract A125). This could imply a need for early combined therapy to produce rapid suppression of HBV replication and abate liver disease progression.

Quality assessment							Summary of findings					Importance
No of studies	Design	Limitations	Inconsistency	Indirectness	Imprecision	Other considerations	No of patients		Effect		Quality	
							Antiretroviral therapy	control	Relative (95% CI)	Absolute		
<b>Mortality 1, 2 and 5 years</b>												
0	no evidence available					none	0/0 (0%)	0/0 (0%)	not pooled	not pooled		
								0%			not pooled	
<b>HIV disease progression</b>												
0	no evidence available					none	0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
								0%			0 fewer per 1000 (from 0 fewer to 0 fewer)	
<b>HBV disease progression (cirrhosis, HCC)</b>												
0	no evidence available					none	0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
								0%			0 fewer per 1000 (from 0 fewer to 0 fewer)	
<b>Severe treatment associated adverse events</b>												
0	no evidence available					none	0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
								0%			0 fewer per 1000 (from 0 fewer to 0 fewer)	
<b>CD4 recovery</b>												
0	no evidence available					none	0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		

								0%		0 fewer per 1000 (from 0 fewer to 0 fewer)			
<b>Other non-AIDS morbidities</b>													
0	no evidence available					none		0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
									0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		
<b>Other HBV related morbidities</b>													
0	no evidence available					none		0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
									0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		
<b>HIV viral load response</b>													
0	no evidence available					none		0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
									0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		
<b>HBV viral load response</b>													
0	no evidence available					none		0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
									0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		
<b>HBV drug resistance</b>													
0	no evidence available					none		0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
									0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		
<b>HIV drug resistance</b>													
0	no evidence available					none		0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
									0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		
<b>Adherence</b>													
0	no evidence available					none		0/0 (0%)	0/0 (0%)	RR 0 (0 to 0)	0 fewer per 1000 (from 0 fewer to 0 fewer)		
									0%		0 fewer per 1000 (from 0 fewer to 0 fewer)		