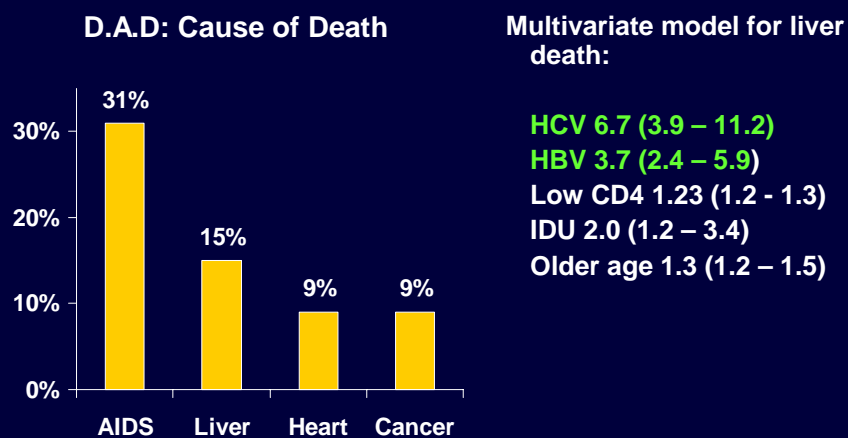


Viral Hepatitis B and C in HIV-infected Person

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Causes of Death in the D.A.D Study 23,441 HIV+ Patients



Weber R et al. Arch Intern Med. 2006 Aug 14-28;166(15):1632-41

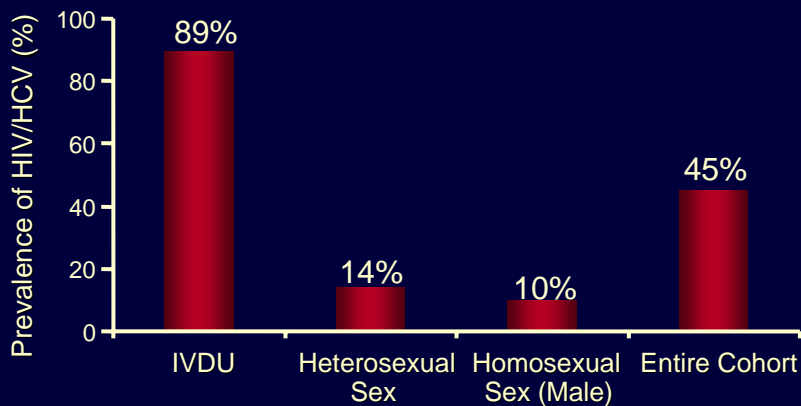
Liver Deaths Occur at Higher CD4 Count and Despite ART

	AIDS related 388	Liver related 181	Other 677
CD4+ nadir	19/mm ³	102/mm ³	108/mm ³
CD4+ pre-death	40/mm ³	196/mm ³	266/mm ³
% Clinical AIDS	100	40	45
% HIV <400c/ml	27	55	58
Years of ART	4.2	5.3	4.9

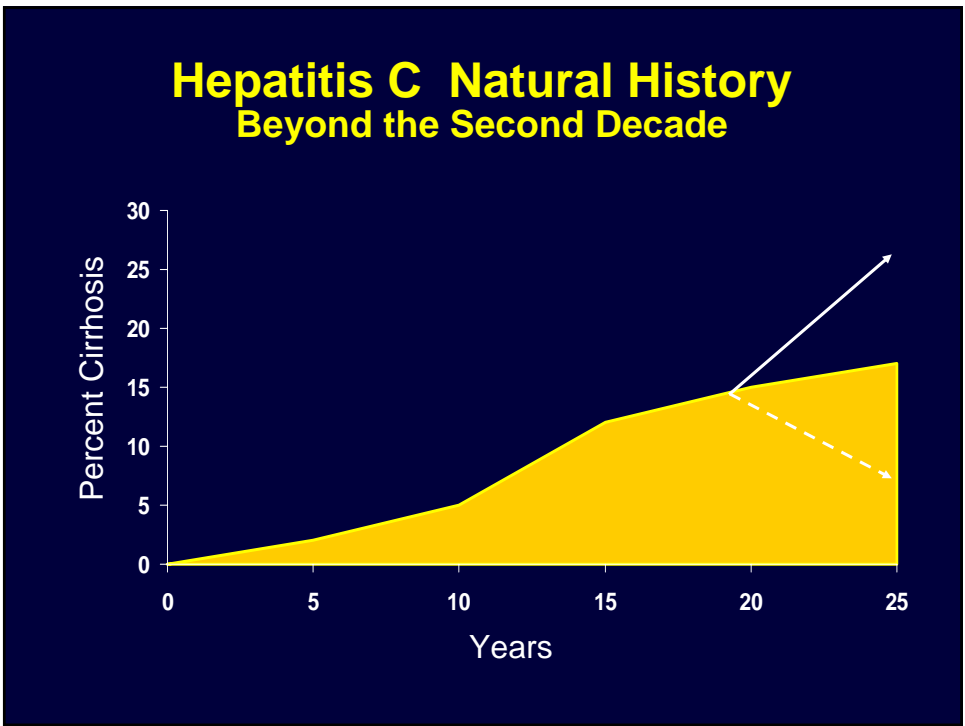
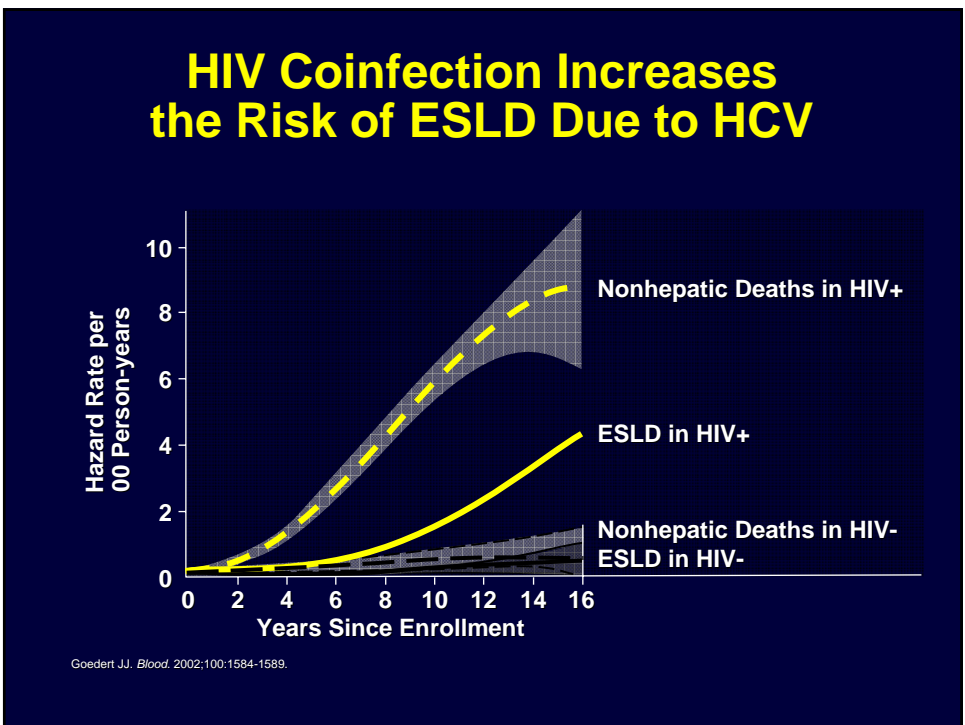
D:A:D Study; Arch Intern Med
2006

Prevalence of HIV/HCV Co-Infection

Johns Hopkins HIV Clinic (N = 1955)



Sulkowski et al...JAMA 2002.



HCV/HIV-infected Patients have Significant Comorbidities

HIV-infected Veterans with and without HCV

	HIV	HIV/HCV
Drug disorder	22%	58%
Alcohol disorder	24%	56%
Depression	28%	43%
Bipolar	6%	12%
Anemia	19%	27%
COPD	17%	21%
Hypertension	37%	42%

Goulet, JL et al. AIDS.19;2005: S99-S105

Anti-HCV Therapy

- Agents:
 - Peginterferon alfa + Ribavirin
- Efficacy
 - SVR 10 – 50% SVR (eradication)
- Tolerability,
 - Poor (decreases with age)
- Effectiveness,
 - Low (< 1% of all patients achieve SVR)

Renal function and ribavirin dosing

Daily doses for ribavirin according to the Cockcroft-Gault CrCl to achieve plasma level ~ 14 µmol/L

– (140 – age) X Weight/Creatinine X 72 (Female X 0.85)

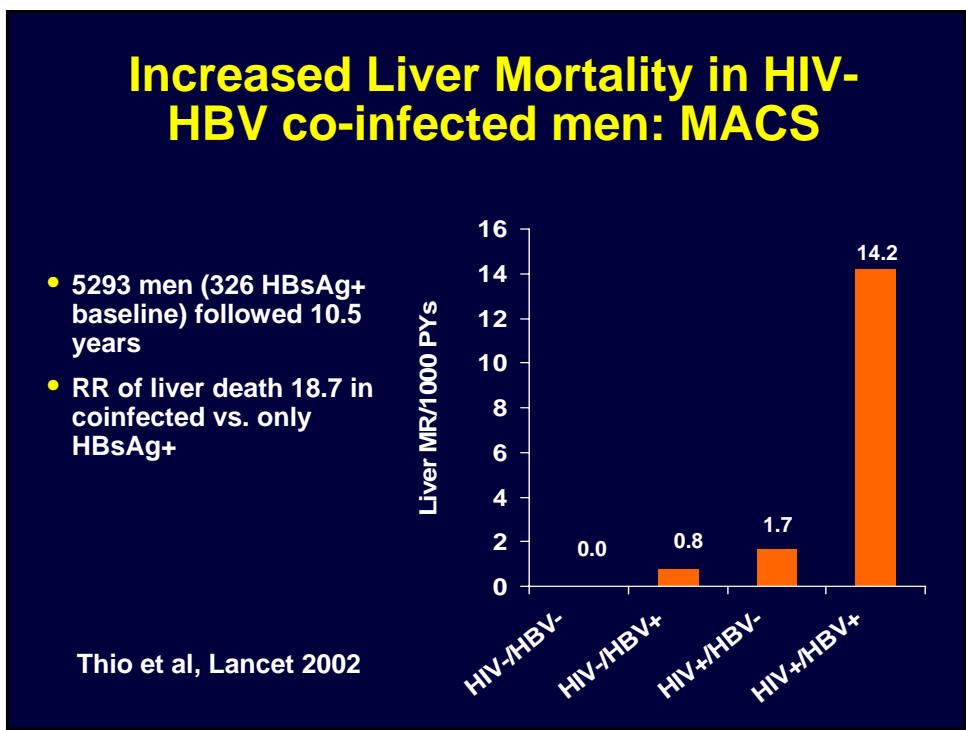
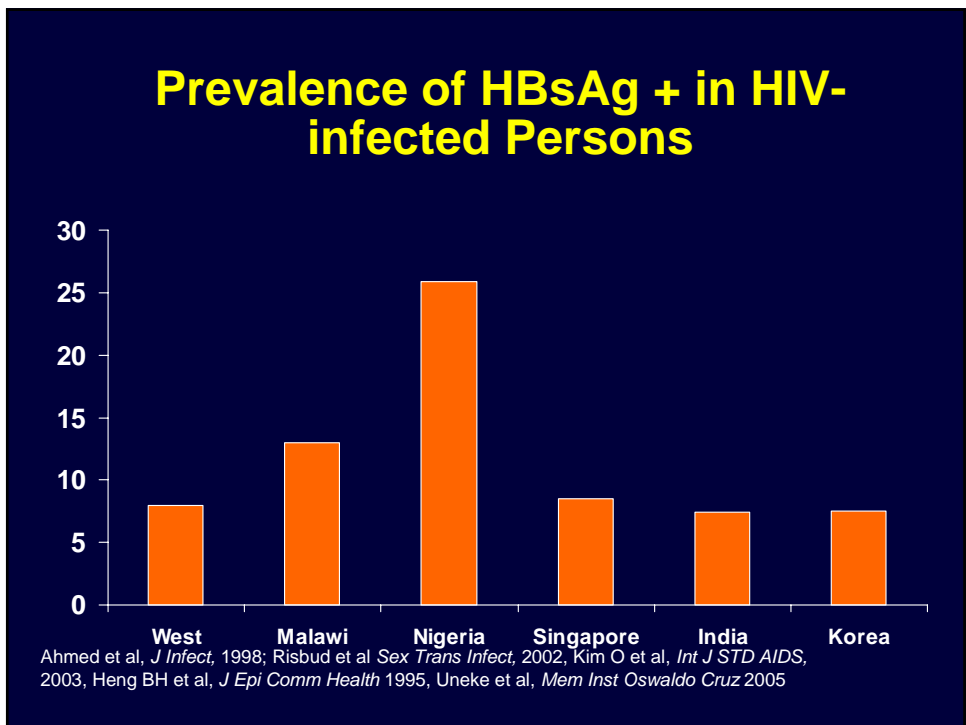
CrCl (mL/min)	120	100	80	60	40	20
Kamar et al		1140	970	800	630	460
Bruchfeld et al	1400	1200	1000	800	600	400

Kamar et al. Am J Kidney Dis 2004; Bruchfeld et al. Ther Drug Monitoring 2002

Age is an independent Risk factors for significant anemia

	Odds Ratio	95%CI	P
Baseline CrCl (mL/min/1.73 m ²)			
99 - 116	4.5	2.1 – 9.5	< .001
116 – 142	3.8	1.8 – 7.8	< .001
Higher baseline Hb (g/dL)			
	1.6	1.3 – 1.9	< .001
Baseline age (years)			
40 - 49	1.5	.73 - 3	.28
≥ 50	2.2	1.0 – 4.6	.04

Sulkowski et al. J Viral Hepatitis 2004



Anti-HBV Therapy

- **Agents**
 - Peginterferon
 - Nucleoside analogues (alone or combination):
 - Lamivudine; Emtricitabine, Telbivudine
 - Nucleotide analogues (alone or combination):
 - Tenofovir; Adefovir
- **Efficacy**
 - High (no eradication)
- **Tolerability**
 - Excellent (except interferon)
- **Effectiveness**
 - High (most HBV/HIV patients treated with ART)

Research Agenda

- **Effects of aging on the natural history of HBV and HCV disease**
 - ESLD
 - HCC – increasing risk with age/duration
- **Medical management of viral hepatitis in older HIV-infected adults**
 - Safety (e.g., comorbid medical conditions)
 - Novel HCV drugs
 - HCV protease and polymerase inhibitors
- **Liver transplantation**