HBV case

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HBV case

- 45 year old man admitted with fatigue, malaise and abdominal swelling in June 2003
- He was born in Eastern Europe, came to US as teenager
- On Examination: jaundice, ascites, no muscle wasting, spider nevi

HBV Laboratory and Imaging

- Bilirubin 3.7, AST 129, ALT 106, albumin 2.4, INR 1.6, Creatinine 0.9
- MELD 19
- HBsAg and HBeAg positive
- HBV DNA 340,000 IU/mL
- AFP 741 mcg/L
- Ascites: paracentesis WCC 183, albumin <1

How would you treat his HBV?

1. Pegylated interferon for 48 week
2. Lamivudine 100 mg per day
3. Entecavir 0.5 mg per day
4. Tenofovir 300 mg per day/ Combination

How would you treat his HBV?

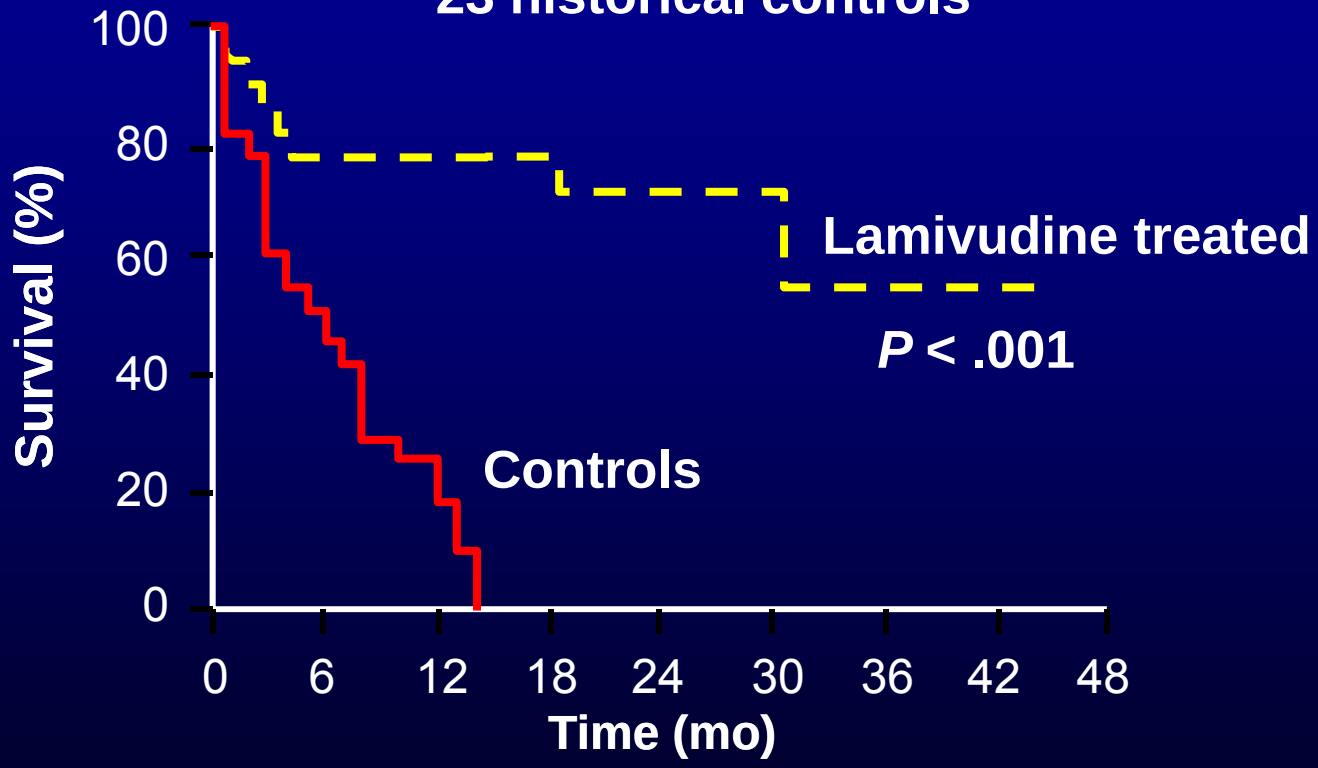
1. Pegylated interferon for 48 week- contraindicated in decompensated disease
2. Lamivudine 100 mg per day- not recommended as first line therapy
3. Entecavir 0.5 mg per day
4. Tenofovir 300 mg per day/ Combination

HBV case-3

- June 2003 started lamivudine 100 mg daily
  - — Well tolerated, lost ascites
  - — Patient had improved liver function
- Evaluated and listed for liver transplantation

Lamivudine in Decompensated Cirrhosis

23 consecutive UCSF patients compared with 23 historical controls



Cumulative probability of survival without liver transplantation

Yao FY, et al. *Hepatology*. 2001;34:411.

	Date	AST	Bili	Albumin	AFP	HBVDNA
LAM→	**6-03**	160	3.7	2.5	741	340,000,000
	11- 03	59	0.9	3.1	14	400,000
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What has occurred?

1. LAM non response
2. LAM resistance
3. Non compliance

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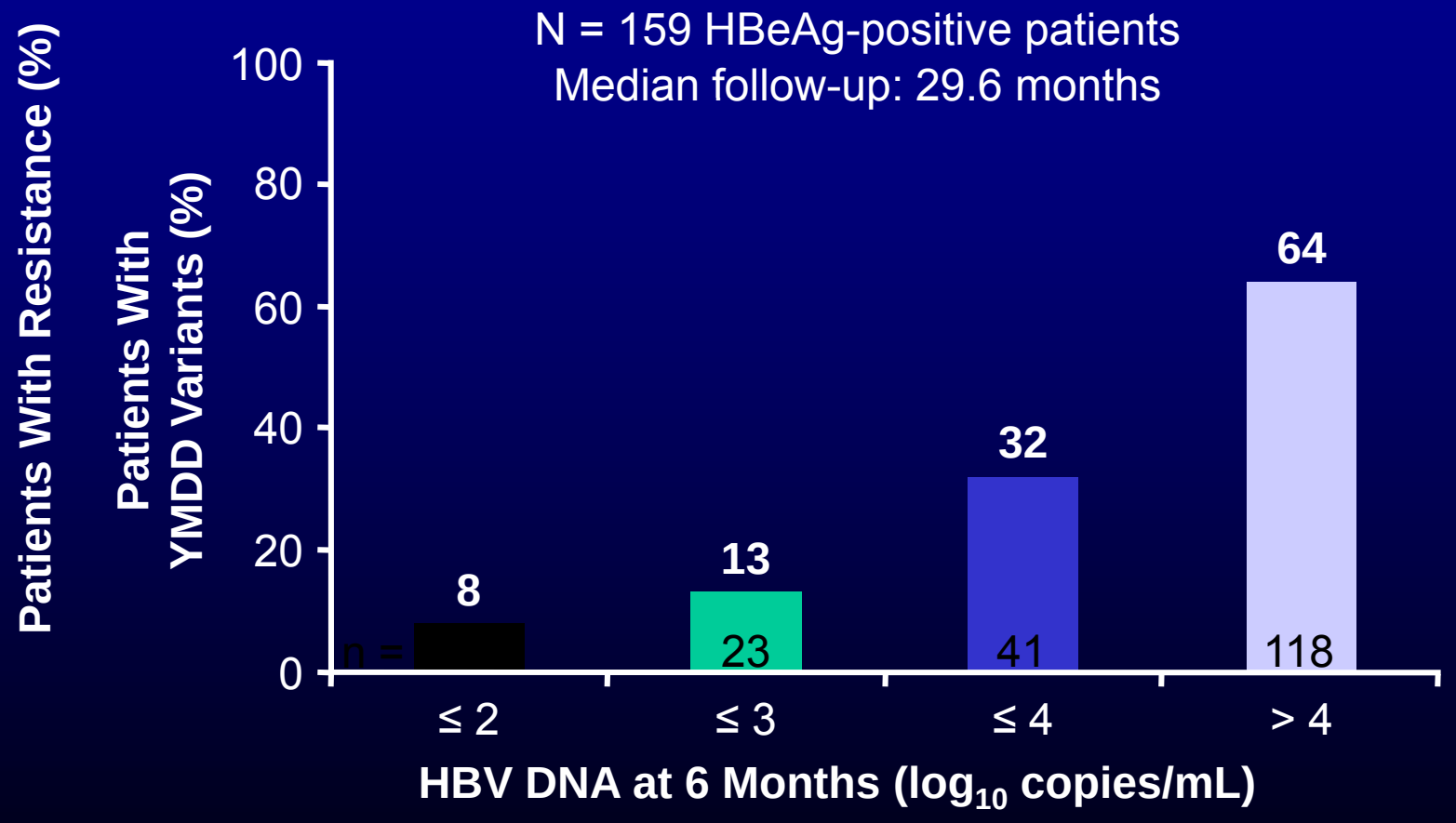
HBV DNA at Month 6 of LAM Predicts Later Risk of Resistance



Yuen ME, et al. Hepatology. 2001;34:785-791.

HBV status

- HBV Genotype A, HBeAg positive
- Polymerase mutations
  - — L180M, M204V
  - — no precore mutations detected
  - — No ADV mutations detected
- HIV negative
- HDV negative

HBV: How would you treat his HBV now with LAM resistance?

1. Switch to Adefovir/TDF
2. Switch to Entecavir 1 mg per day
3. Add Entecavir 1 mg per day
4. Add Adefovir/TDF

HBV: How would you treat his HBV now with LAM resistance?

1. Switch to Adefovir/TDF
2. Switch to Entecavir 1 mg per day- less effective in Lam resistant patients
3. Add Entecavir 1 mg per day
4. Add Adefovir/TDF

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What has occurred?

1. ADV resistance
2. ADV primary non response
3. ADV suboptimal response
4. Non compliance

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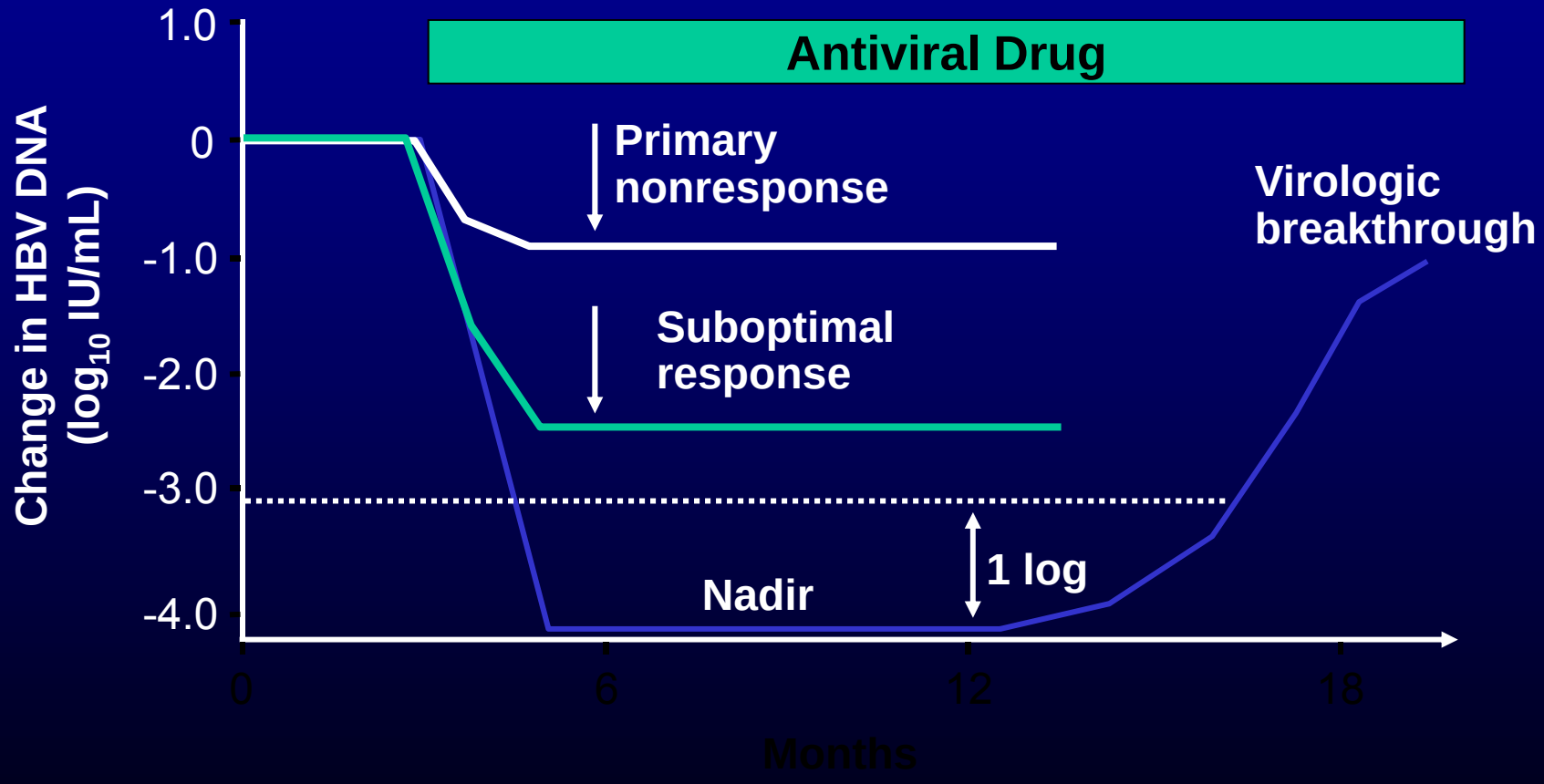
Nonresponse, Suboptimal Response, and Virologic Breakthrough



Lok AS, et al. Hepatology. 2007;45:507-539.

HBV-case: What would you do?

1. Continue ADV
2. Add Tenofovir 300 mg
3. Change to TDF and ETV
4. Change to TDF and Lam/FTC

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→	8-04	68	1.8	3.4	42	15,400,000
Switch To TDF +LAM	11-04	67	1.0	3.7	16	19,200
	5-06	52	1.1	4.0	8	518
	5-07	28	1.0	4.4	3	undetectable
						IU/mL

HBV case interesting points

- Cirrhotics may present with severe flare
- High AFP was related to inflammation
- Lamivudine/ ADV no longer first line
- Adefovir non response ~10%
- TDF/ FTC response may take months (this patient showed over 27 months of continued decline)

Management of HBV

- First line: chose highly potent drug
- Check response at 12 and 24 weeks
- If no response switch
- When virologic breakthrough occurs
  - "Switch to" another drug
  - "Add on" another drug
  - "Switch to" and "add on" another drug
- Choice of second drug generally dictated by lack of cross-resistance