

Giving an Effective Research Presentation

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Presentation Outline

- Planning the presentation
- Slide tips
- Presenting tips
- Summary

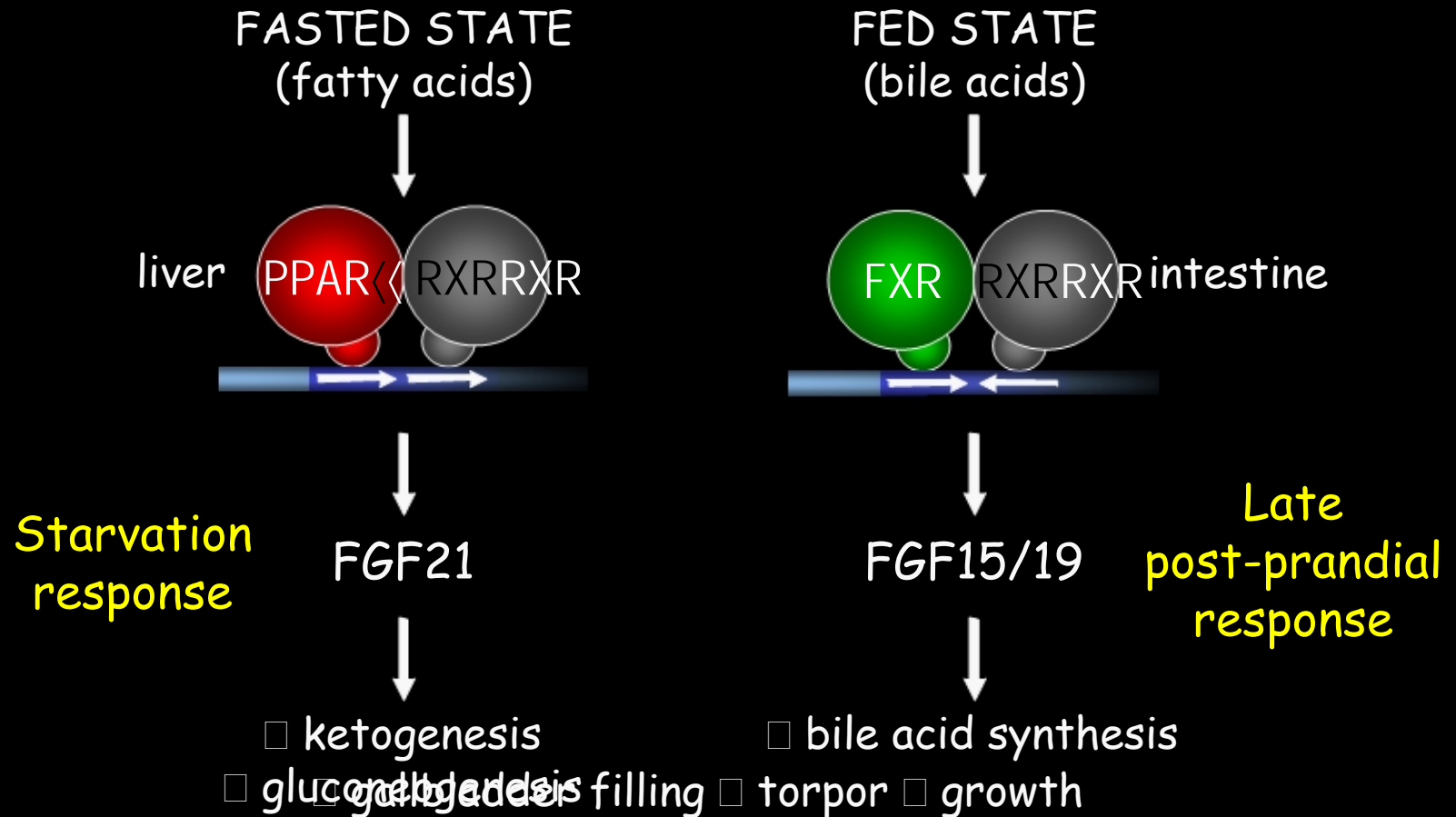
“Tell Them” Rule

- Tell them what you're going to tell them (intro)
- Tell them (body of seminar)
- Tell them what you told them (summary)

No surprises

Make it easy for your audience

Endocrine FGFs Signal Nutritional Status



Planning the Presentation

- In general, KISS (Keep It Simple Stupid); don't overestimate your audience
- Don't cover too much
- Tell a coherent story (organize logically, not necessarily chronologically)
- Each slide should convey one idea

Slide Tips: Text

24

- Use titles that underscore the slide's conclusion
- Be thrifty with words!
- Use 86 bullets per slide
- Use large font sizes
- ALL CAPS ARE LESS LEGIBLE (and angry!)
- Be consistent with fonts and colors

Fibroblast Growth Factor 21

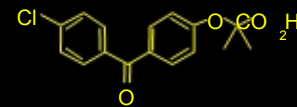
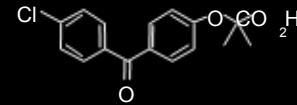
- Member of FGF15/21/23 family of endocrine hormones
- Expressed in liver and pancreas
- Administration to diabetic rodents and monkeys:
 - reduces triglycerides
 - increases insulin sensitivity
 - reduces weight

What is FGF21 doing during fasting?

Studies show that people retain
20% of what they hear
30% of what they see
70% of what they see and hear

Choosing Text Color

- Can you see white better or...
- **Can you see yellow better?**
- Can you see white better or...
- **Can you see yellow better?**



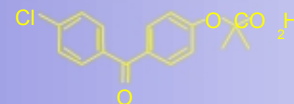
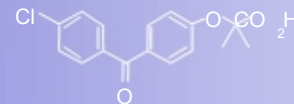
Best contrast is white on black or black on white

If in doubt, project it

Choosing Background Color

- Things start out okay...
- But get worse...
- And worse...
- And worse...
- And worse...
- And worse...
- And worse...
- And worse...
- **And even worse**
- **AND EVEN WORSE**

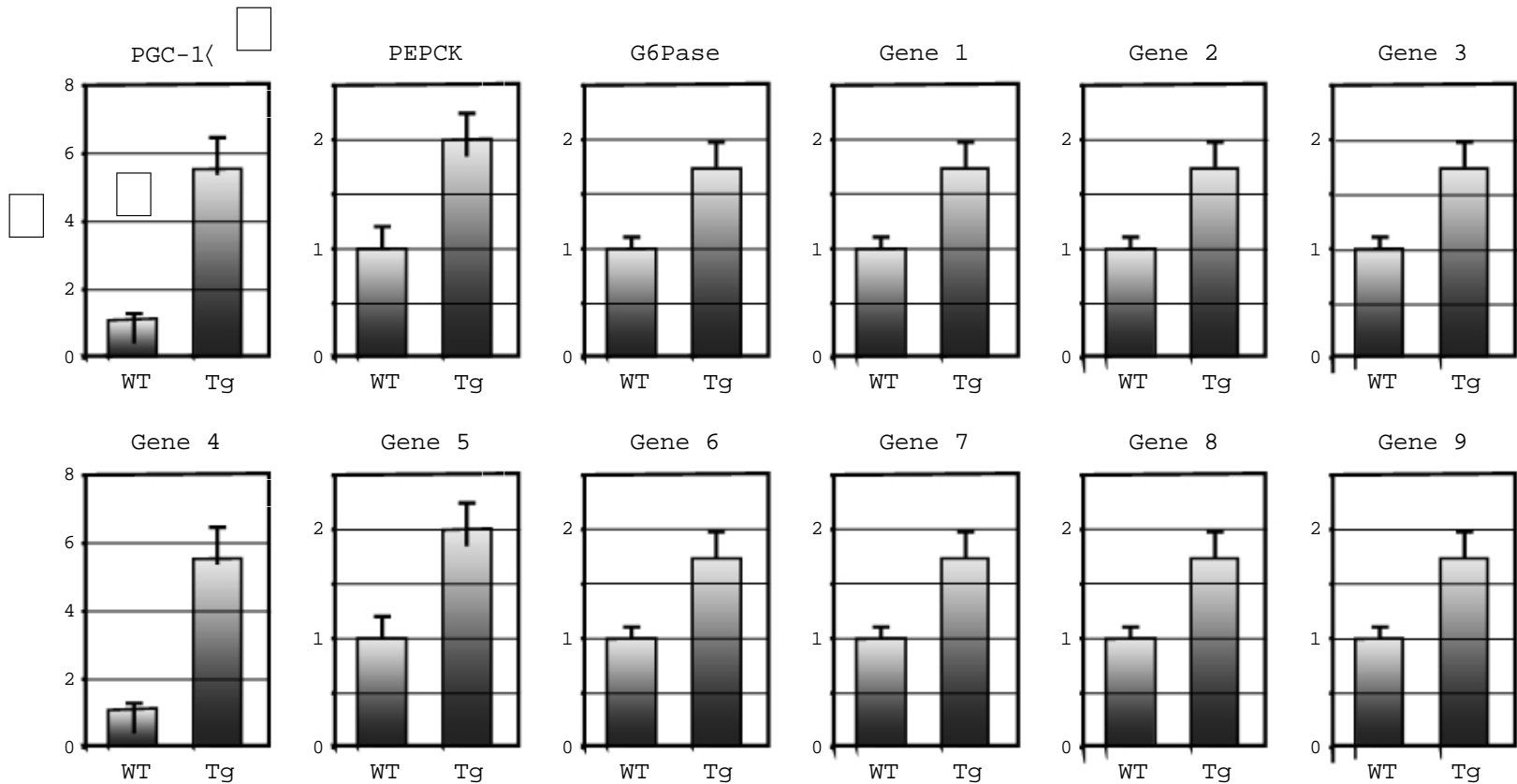
Best contrast is white on black
or black on white



Slide Tips: Graphics

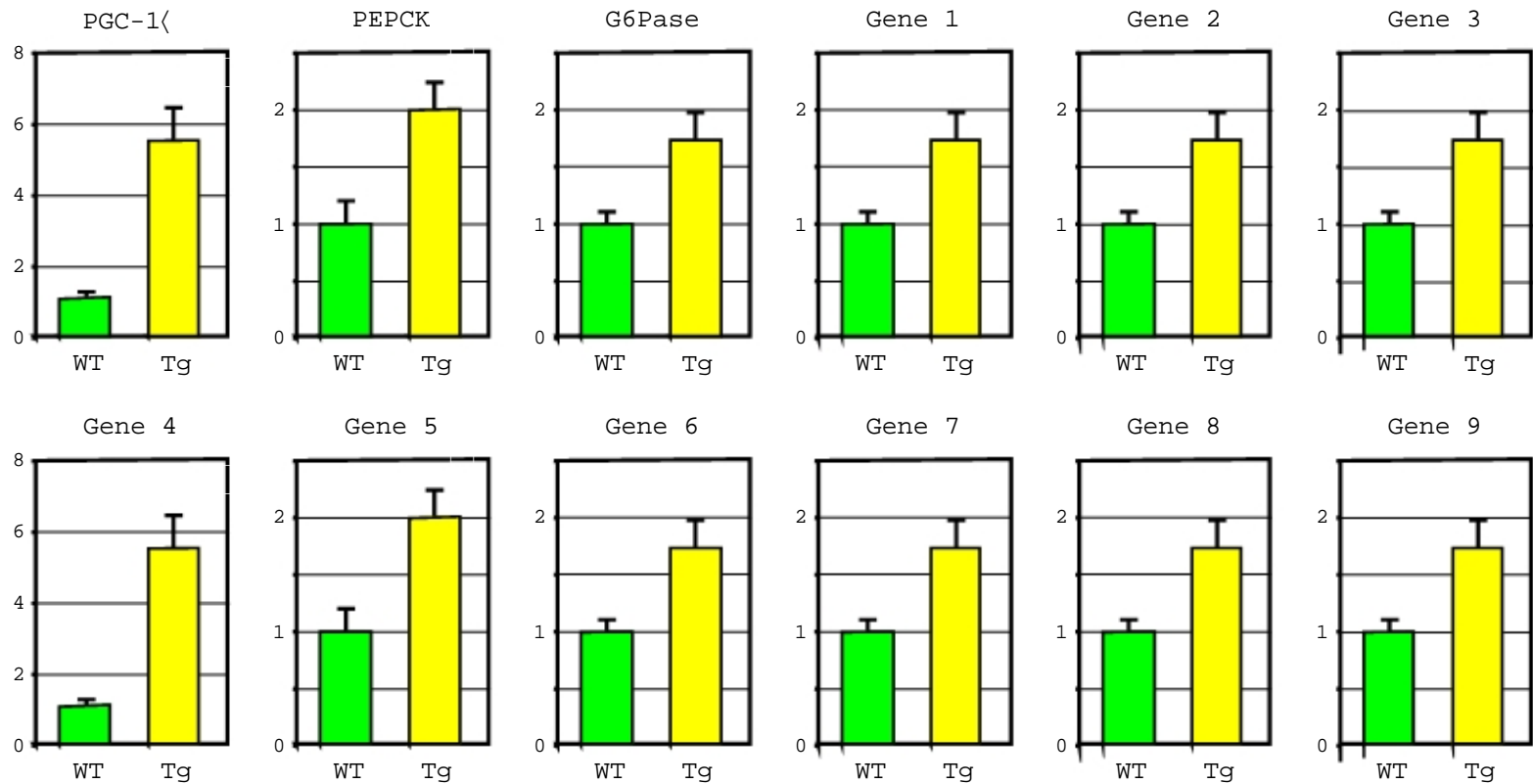
- More data is not better!
- Keep all text large enough to read
- Avoid too much animation
- Keep color schemes simple and meaningful

FGF21 Regulates Everything



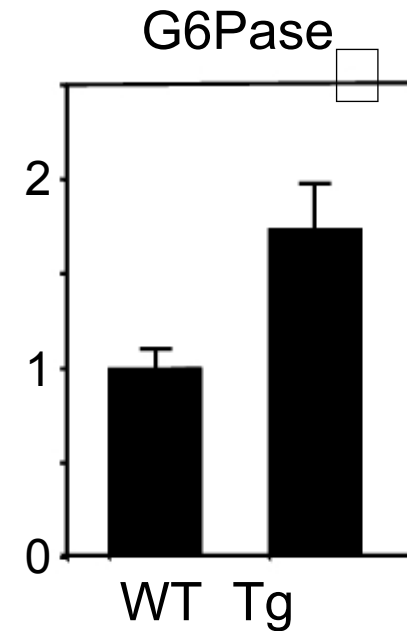
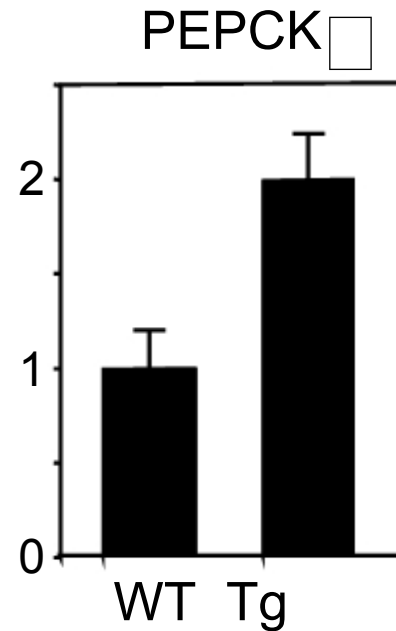
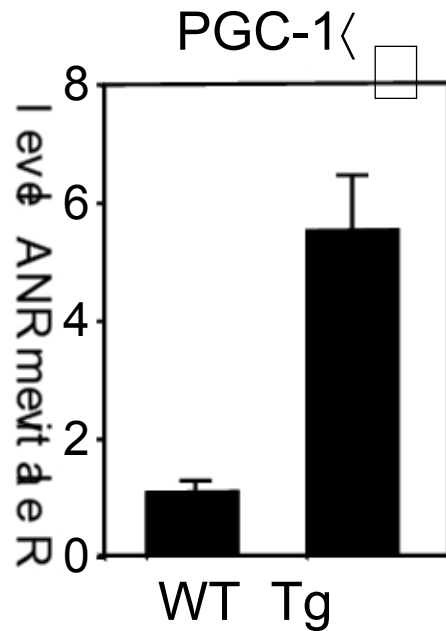
Just when you thought it couldn't get any worse...

FGF21 Regulates Everything



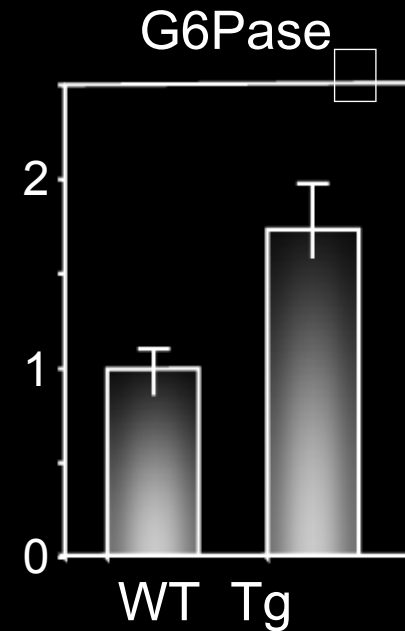
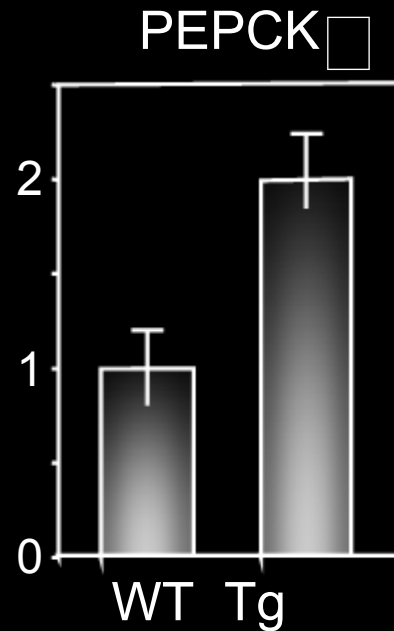
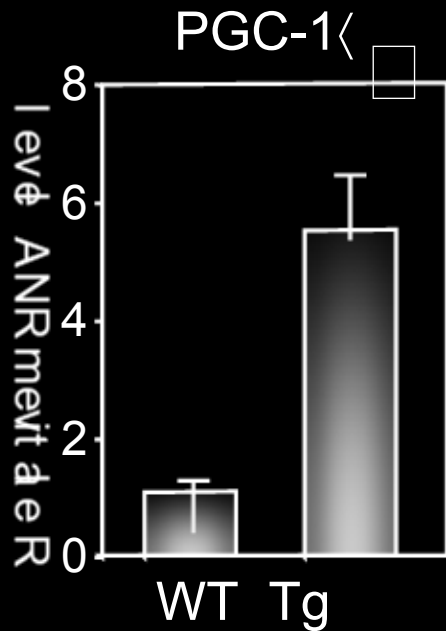
FGF21 Induces Gluconeogenic Genes

WT or FGF21-Tg mice
RTQ-PCR analysis

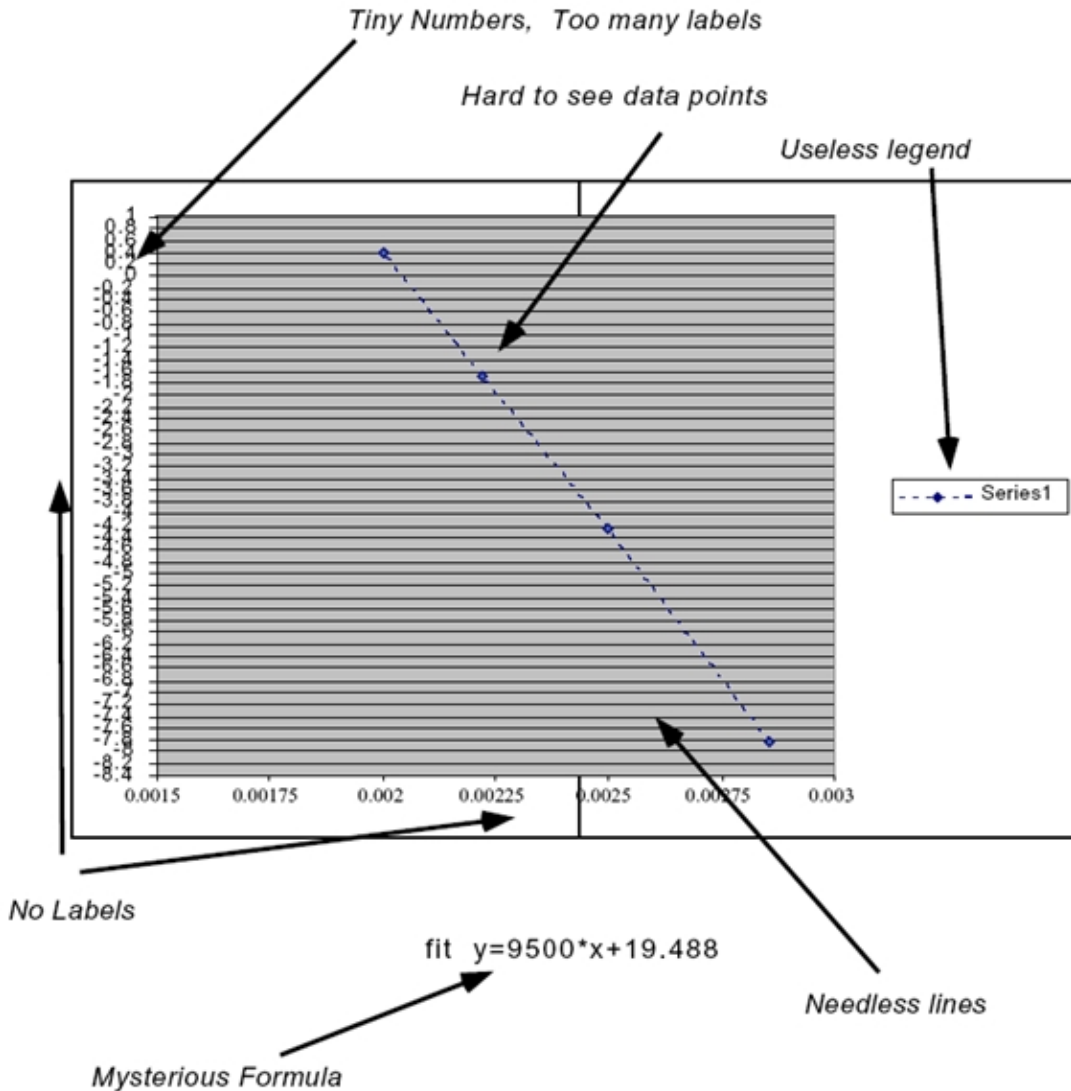


FGF21 Induces Gluconeogenic Genes

WT or FGF21-Tg liver
RTQ-PCR analysis

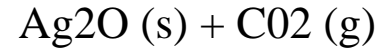


Example of Poor Figure



Heading

Reaction Enthalpy of Silver Carbonate Decomposition



-lnK

axis labels -94
1.75 2.00 2.25 2.50 2.75 3.00

1/T x 10³

Choose Colors Carefully

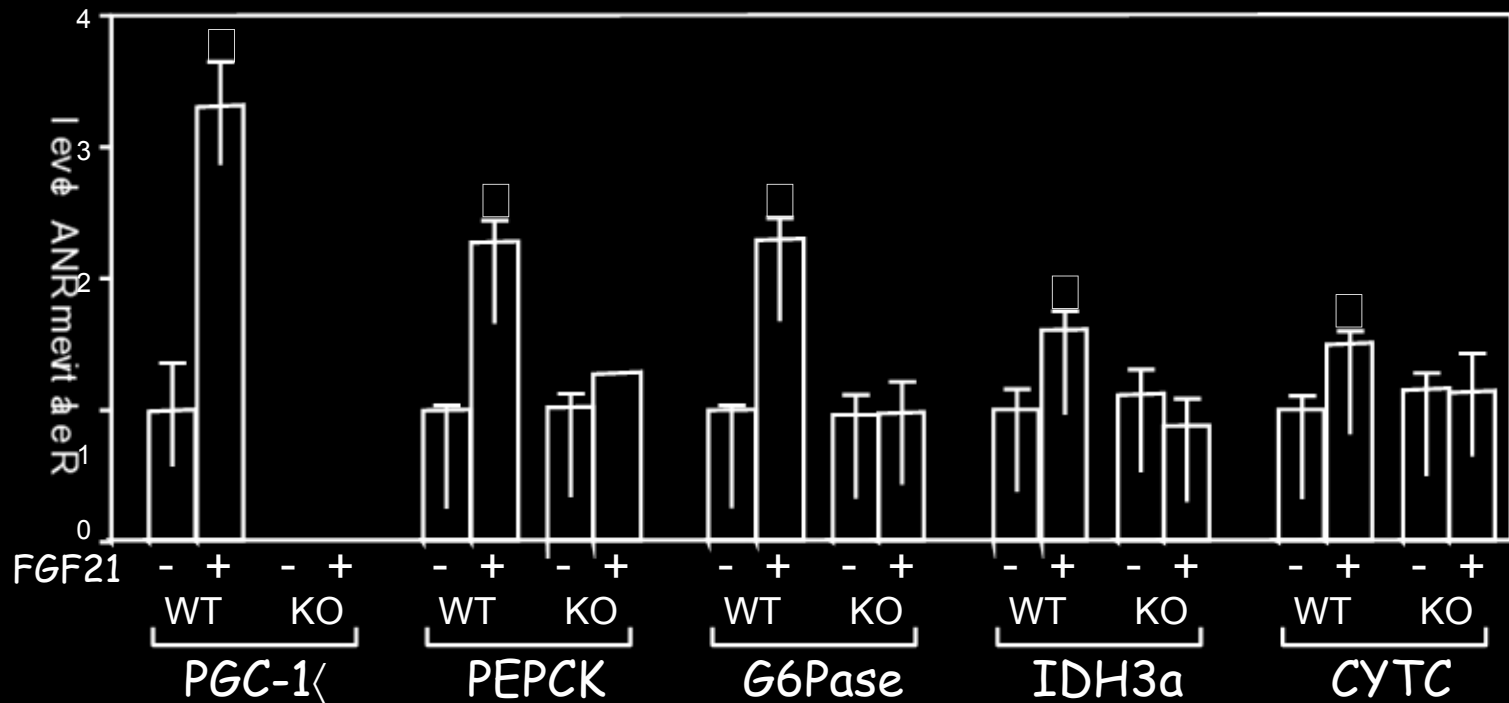
- Web tools are available to aid in color selection •
~8% of men are color blind, so limit use of red and green
- Preview color schemes using a projector

Complementary colors contrast each other to create a dynamic effect
Analogous colors create a unified feeling

<http://office.microsoft.com/en-us/powerpoint>

FGF21 Actions Require PGC-1 α

FGF21 or vehicle injection
16 hr treatment, 2 injections
liver, RTQ-PCR



Presenting Tips

- Rehearse but do not memorize
- Practice out loud
- Know your transitions from slide to slide
- Describe everything on slide
- Think of your presentation as an organized conversation

Presentation Tips (cont.)

- Pace yourself (~1 slide/minute)
- Stay within the time limit!
- Goal: To improve with each presentation

Summary

- Clarity, clarity, clarity (simplicity, simplicity, simplicity)
- Present work in logical order
- Rehearse but don't memorize
- Don't go over the time limit!

Make it easy for your audience

Presenting Clinical Research Data

Dolores Peterson, M.D., Ph.D.
Department of Internal Medicine
UT Southwestern

Important Aspects of Presenting Clinical Research

- Population Being Studied
- Trial Design
- Trial Results
- Safety and Tolerability of the Intervention
- Summary and Conclusions

Population Being Studied

ACTG 5202: BL Characteristics

Characteristic	ABC/3TC (n = 398)	TDF/FTC (n = 399)	All Subjects (n = 797)
Mean age, yrs (SD)	38.8 (9.9)	39.7 (10.1)	39.2 (10.0)
Males, n (%)	331 (83)	345 (86)	676 (85)
Race, n (%)			
White, non-Hispanic	170 (43)	202 (51)	372 (47)
Black, non-Hispanic	112 (28)	94 (24)	206 (26)
Hispanic	103 (26)	93 (23)	196 (25)
Mean HIV-1 RNA, log ₁₀ copies/mL (SD)	5.1 (0.6)	5.1 (0.6)	5.1 (0.6)
Mean CD4+ cell count, cells/mm ₃ (SD)	181 (173)	182 (153)	181 (163)
History of AIDS, n (%)	102 (26)	87 (22)	189 (24)
Genotype* at screening, n (%)	175 (44)	166 (42)	341 (43)

*Only *required* if HIV infection acquired in previous 12 months. Sax PE, et al. IAC 2008. Abstract THAB0303.

Table 1

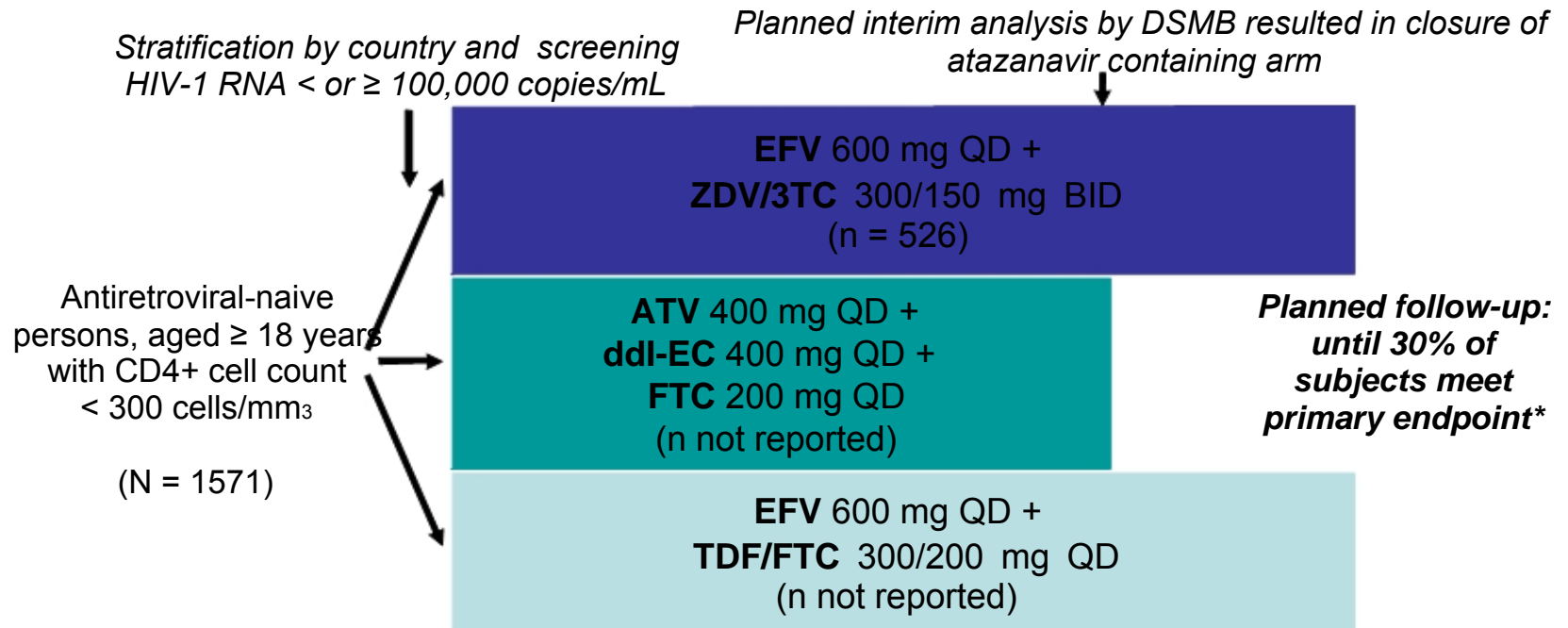
Characteristics of Patients

	Medan	(Low - High)
Age Yr	50	46 - 53
HIV - Diagnosis Yr	11.2	7.8-18.2
ART Yr	7.8	4.9-11.2
Protease inhibitor ART Yr	7.1	4.9-11.2
Thymidine analogue ART Yr	7.1	1.2-7.9
Lipodystrophy Yr	4.7	2.8-5.7
Ptosis Repair Yr	0.4	0.1 - 1.5
Nadir CD4+ T-Cell Count celUul	202	19 - 440
Recent CD4• T-Cel Count cell/ul	620	135 - 1042

Trial Design

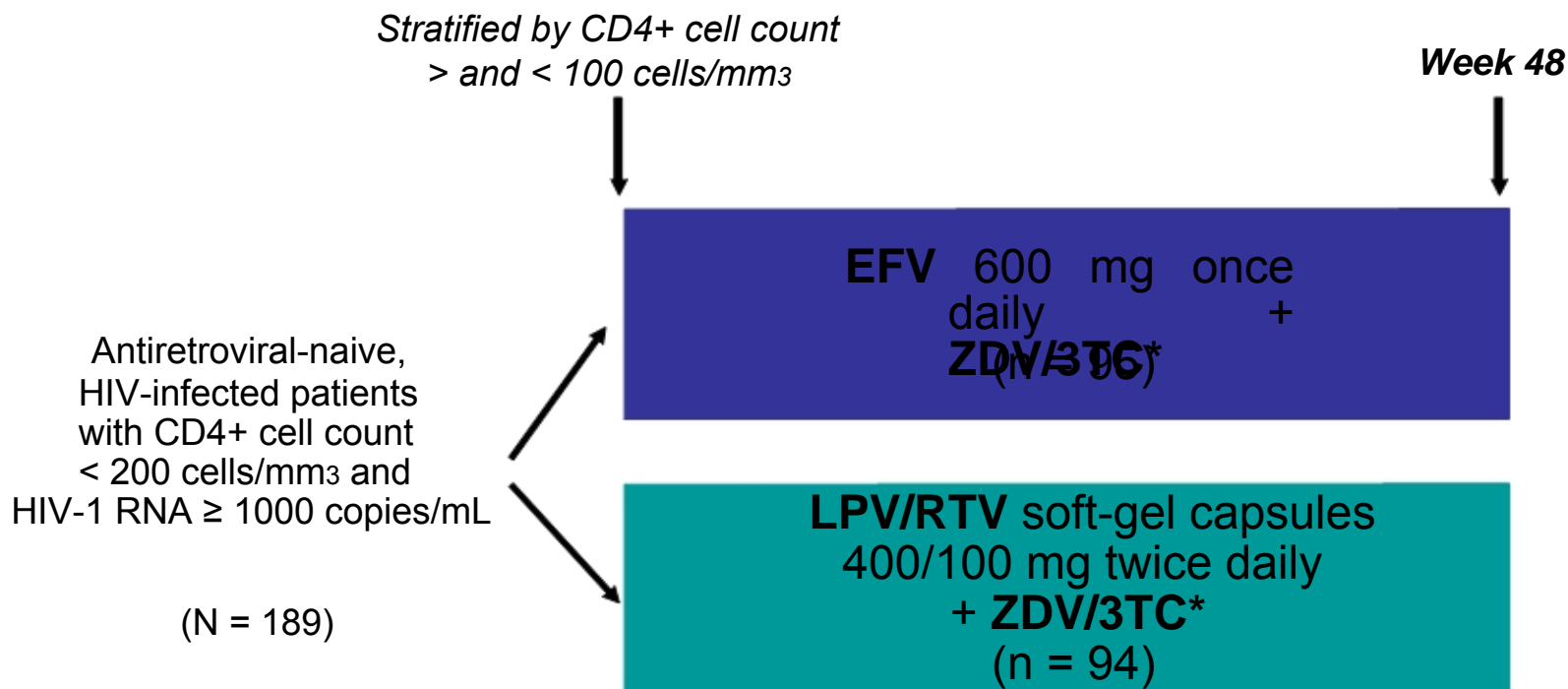
PEARLS/ACTG A5175: Safety, Efficacy of QD HAART in Diverse Tx-Naive Pts

- Multicenter, randomized, open-label, phase IV study



*Primary endpoint: time to first of following: VF(HIV-1 RNA \geq 1,000 copies/mL at \geq Week 16), time to disease progression (new AIDS-defining condition at \geq Week 12 except IRIS), time to death
Campbell T, et al. IAC 2008. Abstract THAB0404.

EFV vs LPV/RTV in Tx-Naive Pts With CD4+ < 200 in Mexico

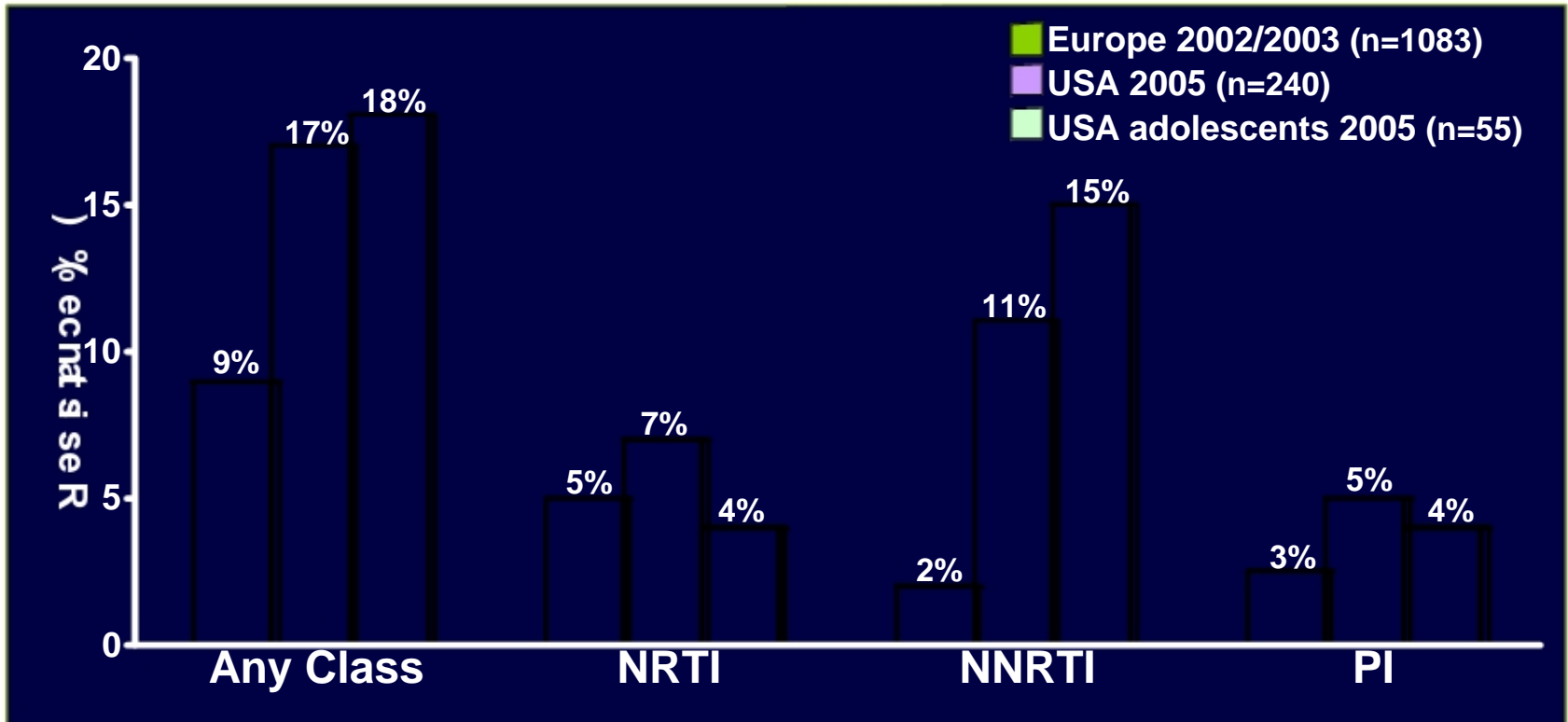


*ABC substitution for ZDV allowed.

Madero JS, et al. IAC 2008. Abstract TUAB0104.

Trial Results

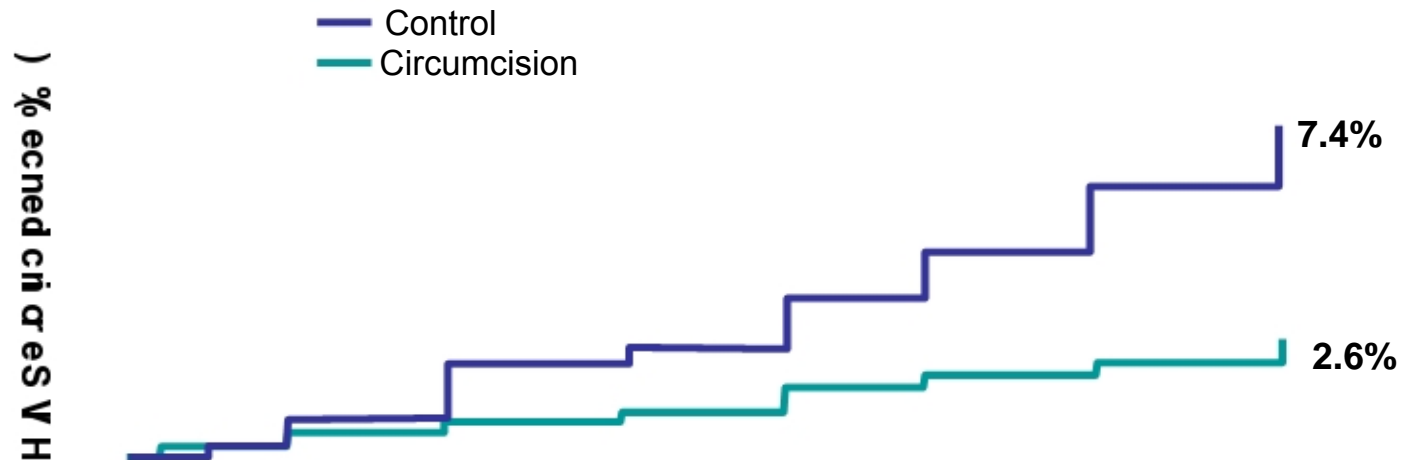
Prevalence of Transmitted Drug Resistance



Wensing AM, et al. *J Infect Dis.* 2005;192:958-966.
Wensing AM, et al. 16th IAC, 2006. Abstract
TuAB0101. Ross L, et al. 46th ICAAC, 2006. Abstract
H-993. Viani R, et al. *J Infect Dis.* 2006;194:1505-
1509.

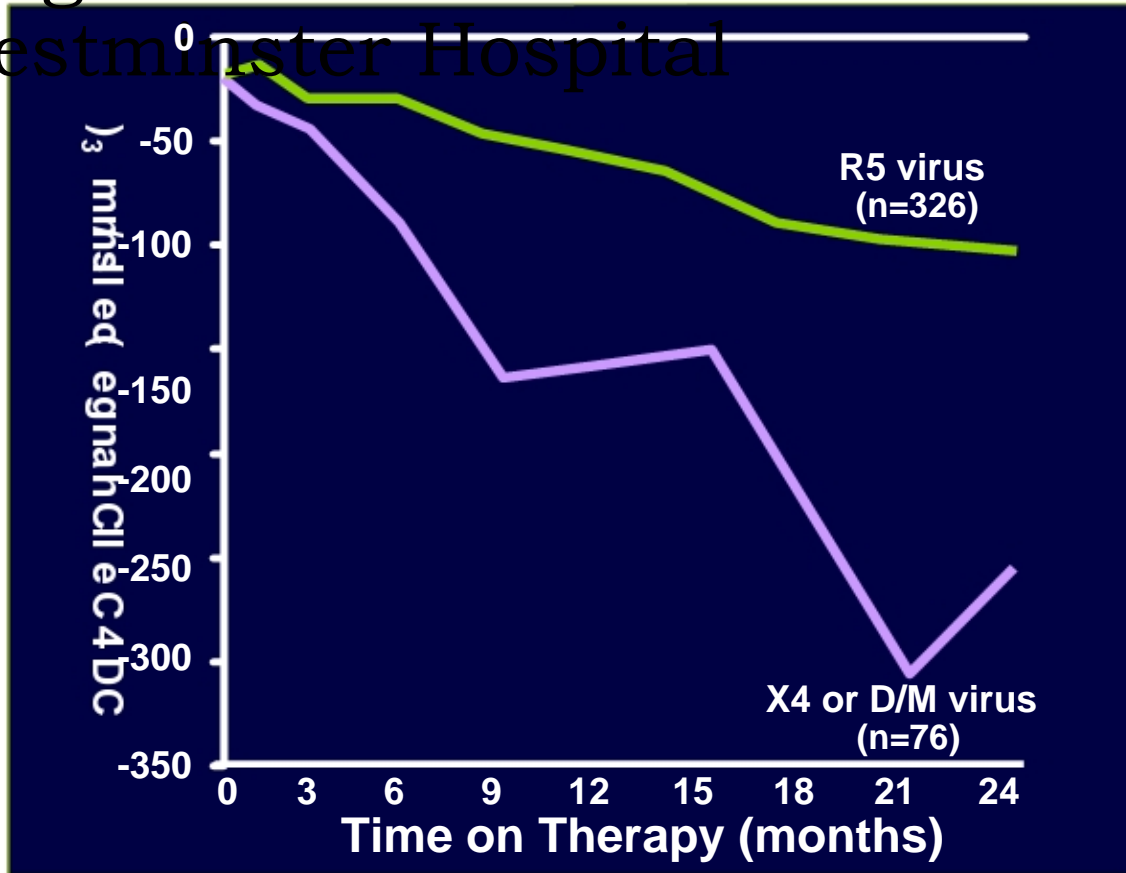
Kisumu Study: Circumcision Remains Protective Against HIV Acquisition

- Kisumu, Kenya trial: extended follow-up of prospective, randomized, controlled trial (N = 1491)
 - Cumulative risk of HIV infection 64% lower in circumcision vs control at 42 months



Bailey RC, et al. IAC 2008. Abstract THAC0501.

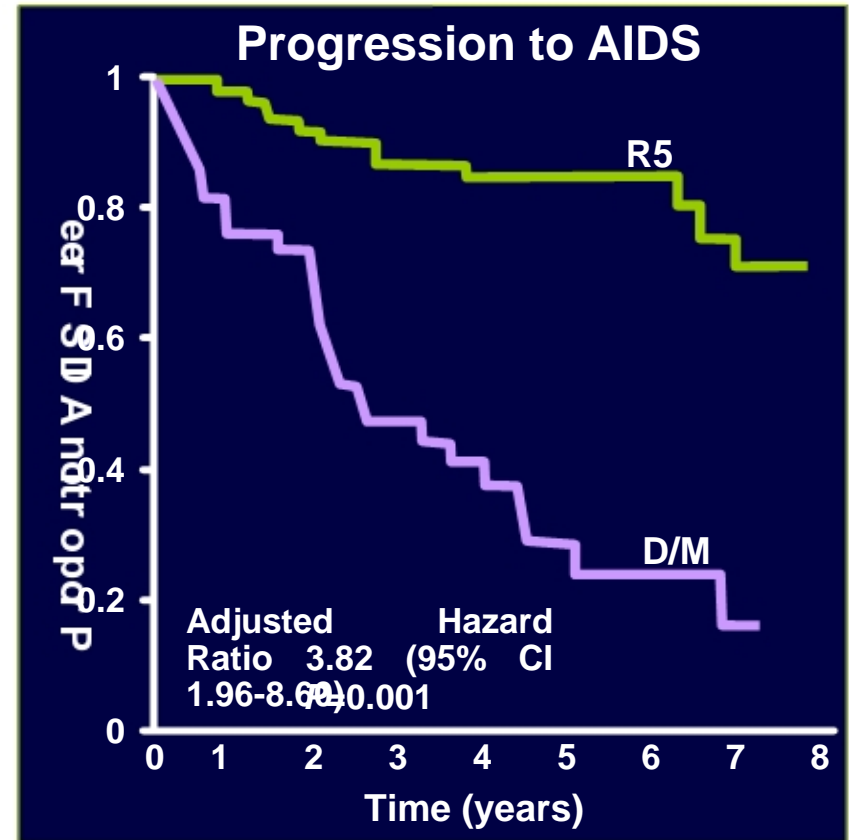
HIV-1 Tropism and Disease Progression: Chelsea and Westminster Hospital



Waters LK, et al. *Clin Infect Dis*. 2008;46:1617-1623.

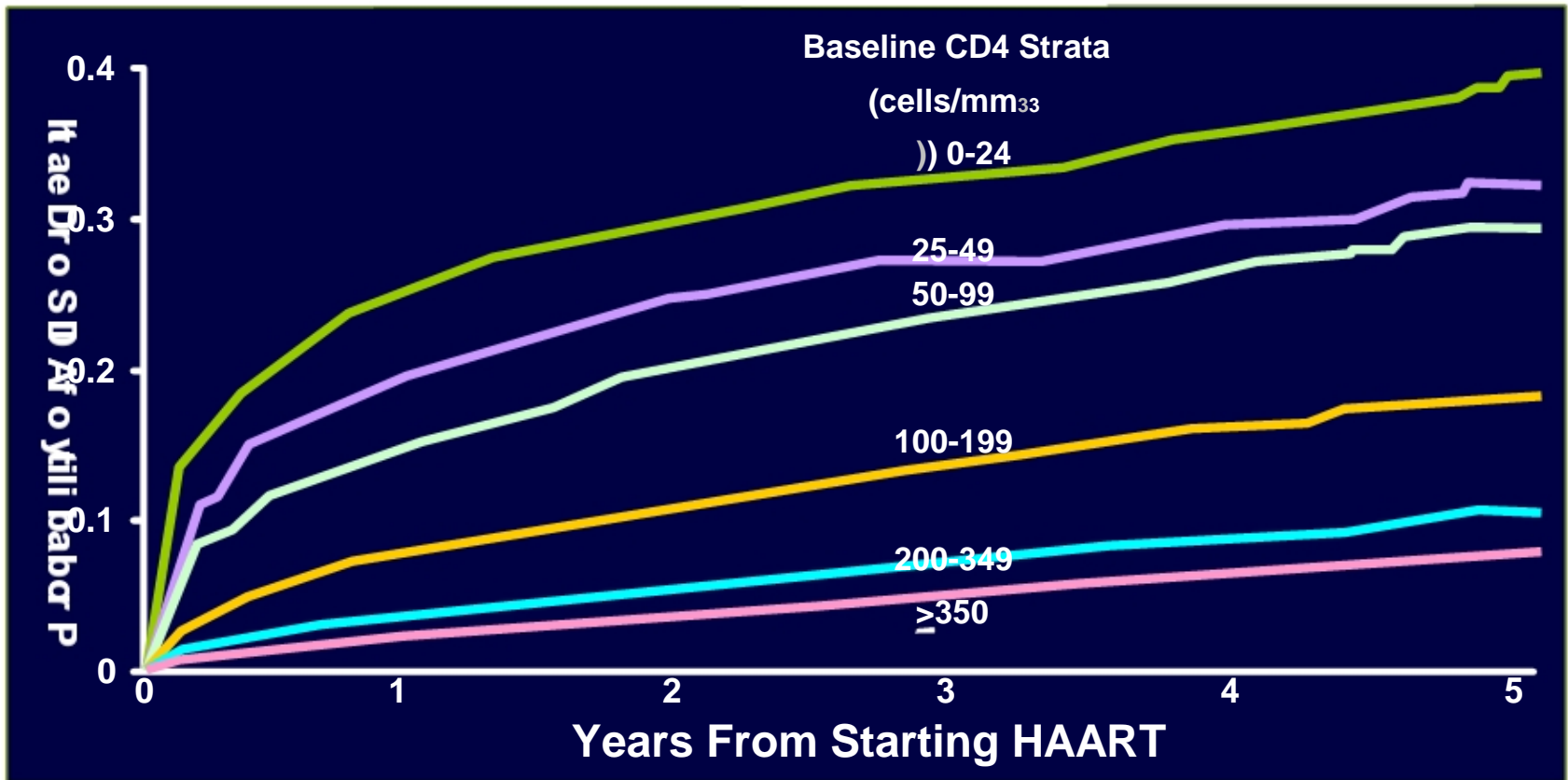
Baseline Tropism Predicts Disease Progression

- Hemophilia Growth and Development cohort (1989-1997)
 - Recombinant phenotypic assay
 - 126 children and adolescents
- Baseline characteristics at time of tropism assay
 - Age: 13.8 years - HIV duration: 7 years
 - HIV RNA: 3.7 log₁₀ copies/mL
 - CD4 (cells/mm³)
 - R5 (n=75): 449
 - D/M (n=51): 200



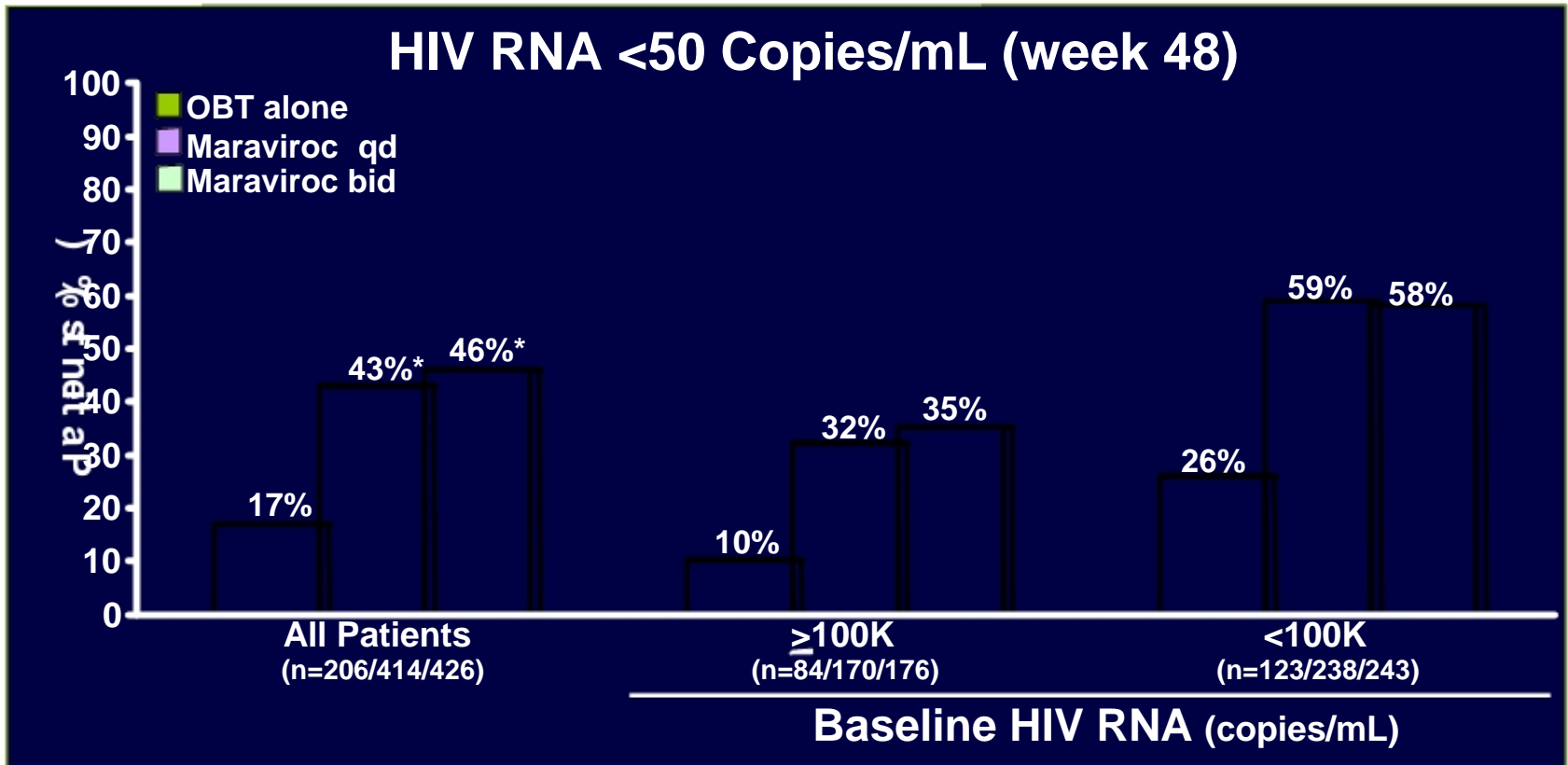
Daar ES, et al. *Clin Infect Dis*. 2007;45:643-649.

ART Cohort Collaboration: Prognosis for AIDS or Death After Starting HAART



May M, et al. *AIDS*. 2007;21:1185-1197.

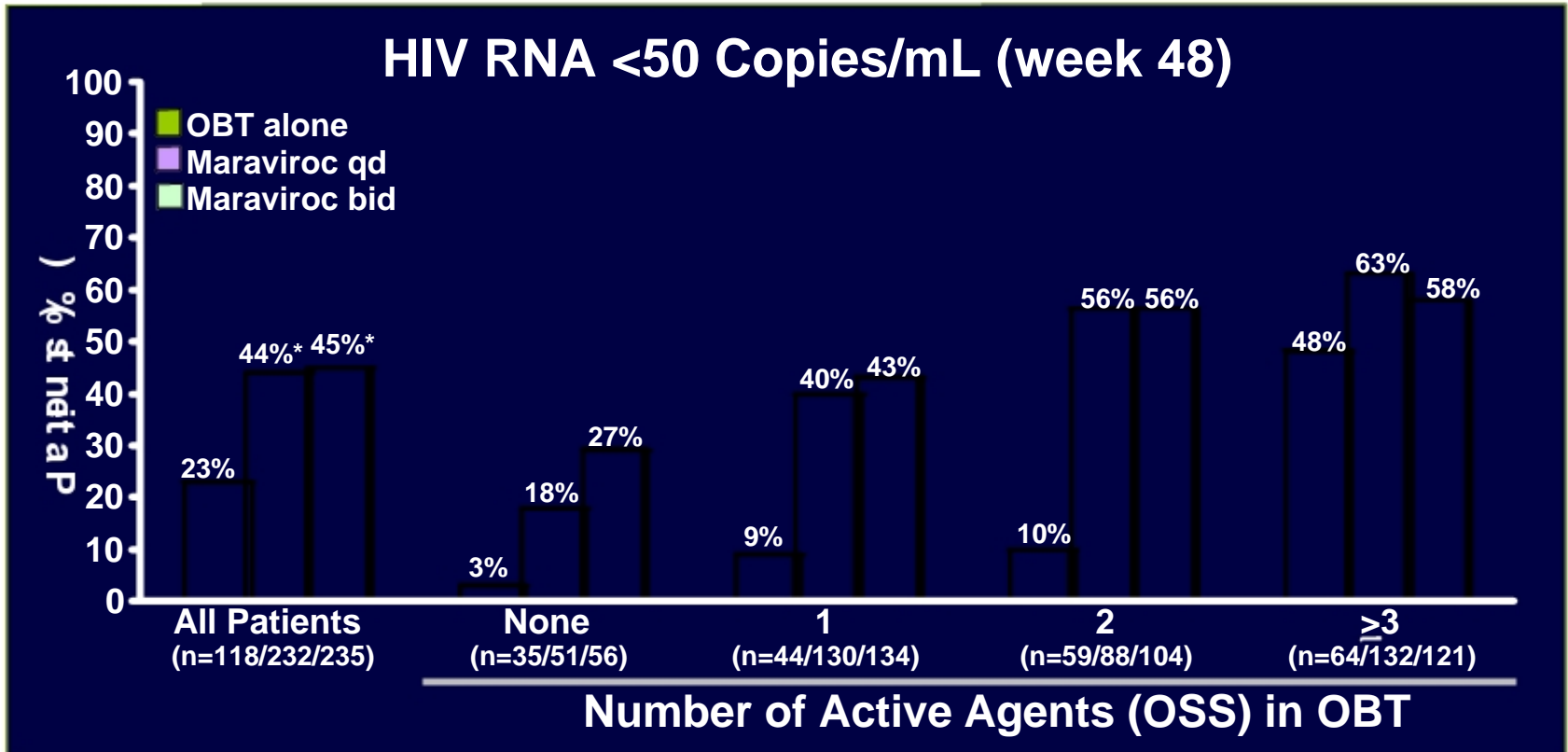
MOTIVATE Combined Analysis: Outcomes by Baseline HIV RNA



* $P < 0.0001$ versus OBT alone.

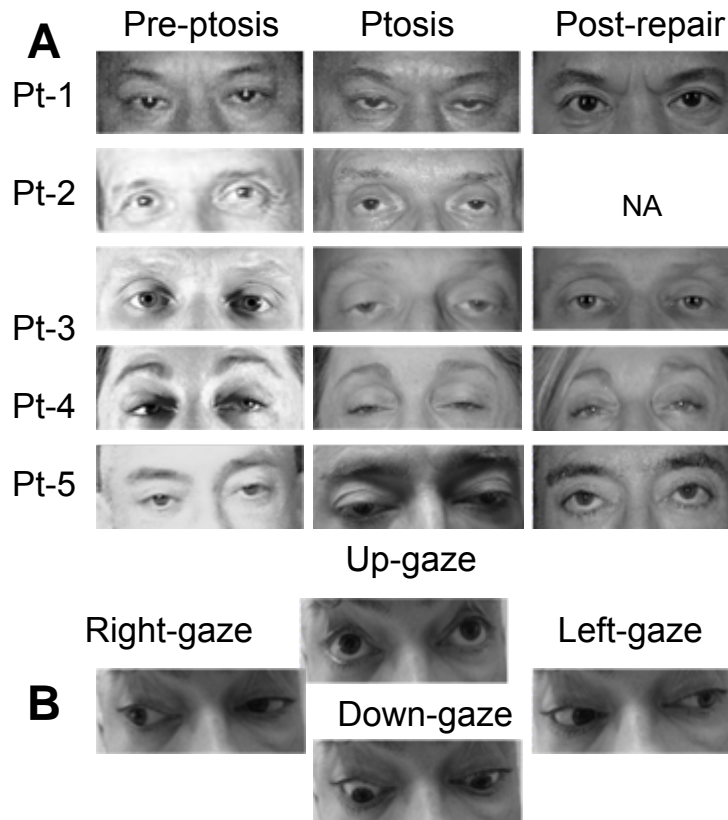
Gulick RM, et al. *N Engl J Med.* 2008;359:1429-1441.
 Fatkenheuer G, et al. *N Engl J Med.* 2008;359:1442-1455.

MOTIVATE Combined Analysis: Outcomes by Number of Active Agents in OBT

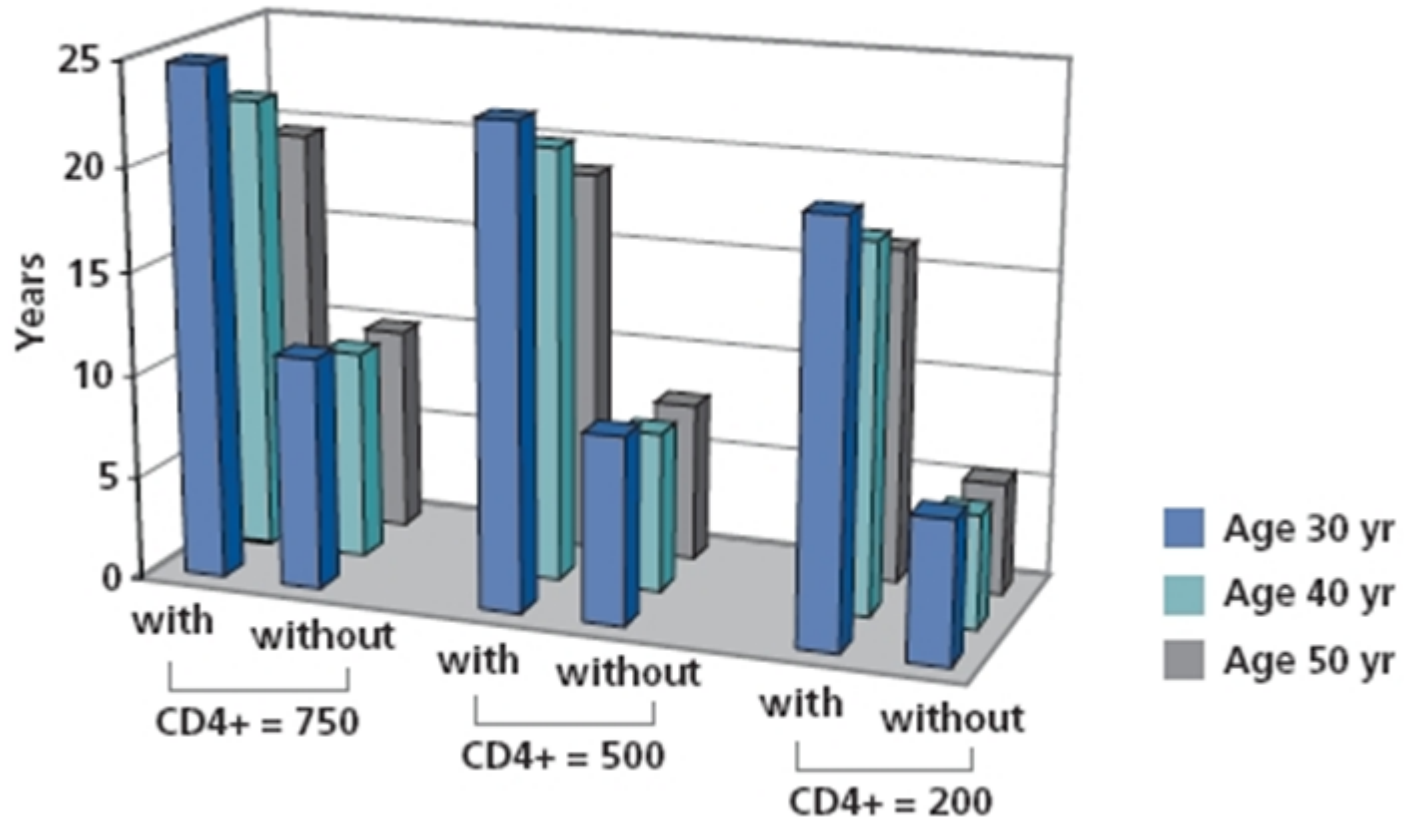


* $P < 0.0001$ versus placebo. OSS=overall susceptibility score (phenotypic and genotypic susceptibility at baseline). Gulick RM, et al. *N Engl J Med.* 2008;359:1429-1441. Fatkenheuer G, et al. *N Engl J Med.* 2008;359:1442-1455.

Blepharoptosis Photographs



Estimated life-expectancy in HIV-infected Persons with and without Antiretroviral Therapy



Safety and Tolerability of the Intervention

ACTG 5142: 96--Week Tolerability Results

	Lopinavir/r (n=253)	Efavirenz + Lopinavir/r (n=250)	Efavirenz (n=250)
Grade 3/4 adverse event (%)	18	17	17
Grade 3/4 laboratory abnormality (%)	32	43*	29
LDL-C >190 mg/dL (%)	1	6†	3
Triglycerides >750 mg/dL (%)	6‡	14*	2
AST >5 times ULN (%)	6	8‡	4

Riddler SA, et al. *N Engl J Med.* 2008;358:2095-2106.

Summary and Conclusions

Summary of Sustained Virologic Response in HIV/HCV-Coinfected Patients

Sustained Virologic Response at Week 72 (%)

Overall Genotype 1 Genotype 2/3

	Overall	Genotype 1	Genotype 2/3
AACTG 5071¹			
IFN/RBV (n=67)	12	6	33
Peg-IFN/RBV (n=66)	27	14	73
APRICOT²			
IFN/RBV (n=285)	12	7	20
Peg-IFN/RBV (n=289)	40	29	62
Peg-IFN (n=286)	20	14	36
RIBAVIC³			
IFN/RBV (n=207)	20	6	43
Peg-IFN/RBV (n=205)	27	17	44

AACTG 5071 ribavirin dose: 600, 800, and 1000 mg/day for weeks 1-2, 4-8, and 8-72, respectively. Ribavirin dose was fixed at 800 mg/day for APRICOT and RIBAVIC.

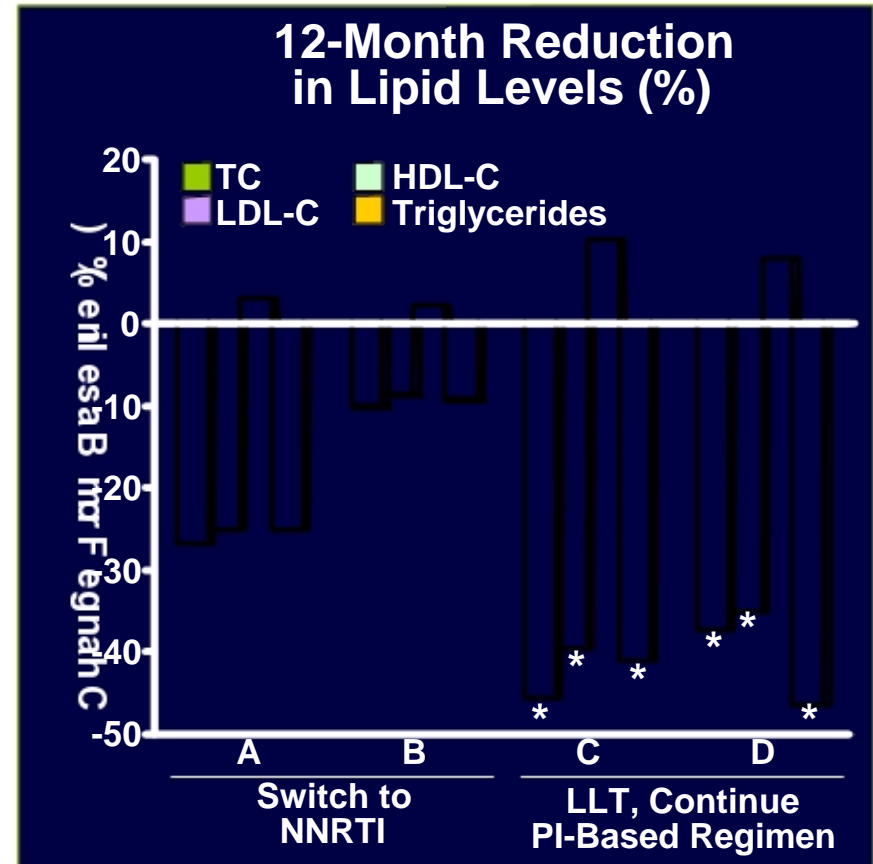
¹Chung R, et al. *N Engl J Med.* 2004;351:451-459.

²Torriani FJ, et al. *N Engl J Med.* 2004;351:438-450.

³Carrat R, et al. *JAMA.* 2004;292:2839-2848.

Lipid-Lowering Therapy Versus Substitution of NNRTI for PI

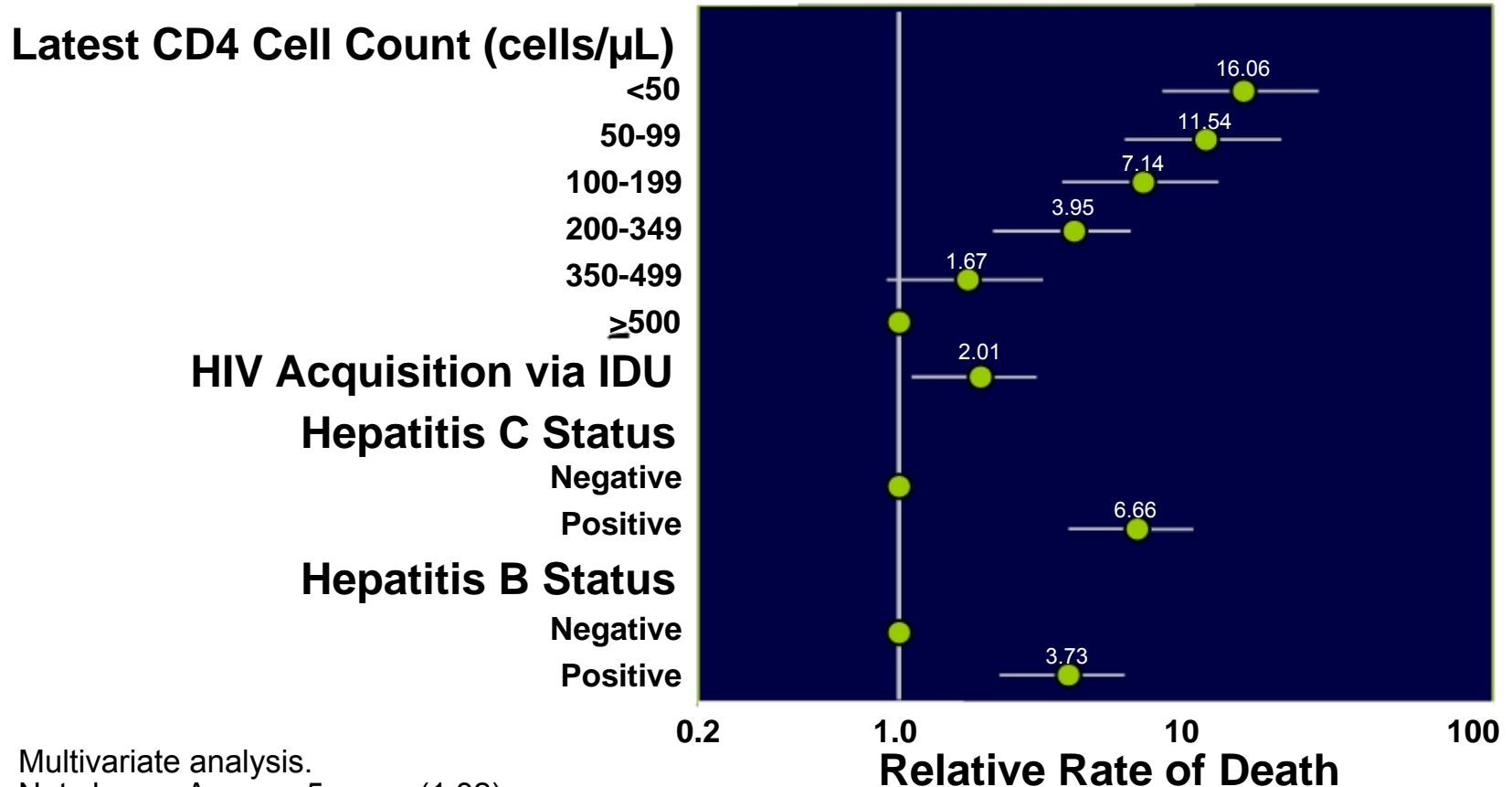
- Open-label trial (n=130)
 - Patients with mixed hyperlipidemia
 - First PI-based HAART regimen
 - Stable virologic and immunologic parameters
 - NNRTI-naïve
- Randomized arms
 - Arm A: switch PI to nevirapine
 - Arm B: switch PI to efavirenz
 - Arm C: add pravastatin, continue PI-based regimen
 - Arm D: add bezafibrate, continue PI-based regimen
- Reductions in lipids achieved in first 6 months and maintained thereafter



* $P < 0.01$ versus switch to nevirapine or efavirenz.

Calza L, et al. *AIDS*. 2005;19:1051-1058.

Independent Predictors of Liver-Related Death



Multivariate analysis.

Not shown: Age per 5 years (1.32).

Weber R, et al. *Arch Intern Med.* 2006;166:1632-1641.

Conclusions-Blepharoptosis and External Ophthalmoplegia

- Likely Chronic ART Associated Condition
- Implicated Agents: Thymidine-Analogues, Protease Inhibitors
- Co-associations
 - Lipodystrophy Syndrome
 - Cardiac Conduction Disturbances
 - Comorbidity of other chronic viral infections or inflammatory conditions
- Responds to Surgical Repair
- Possible Impacts to Care
 - Ptosis & Ophthalmoplegia
 - Awareness ECG monitoring of
 - ART Increased Peripheral Neuropathy Screening
 - Concern for Proximal Weakness, Dysphagia,
 - Deafness
- Possible Generalized Mitochondrial Disorder