# Successful Treatments for Early Psychosis: Consistent Antipsychotic Use, Supportive Education/Employment, Cognitive Training, and Aerobic Exercise

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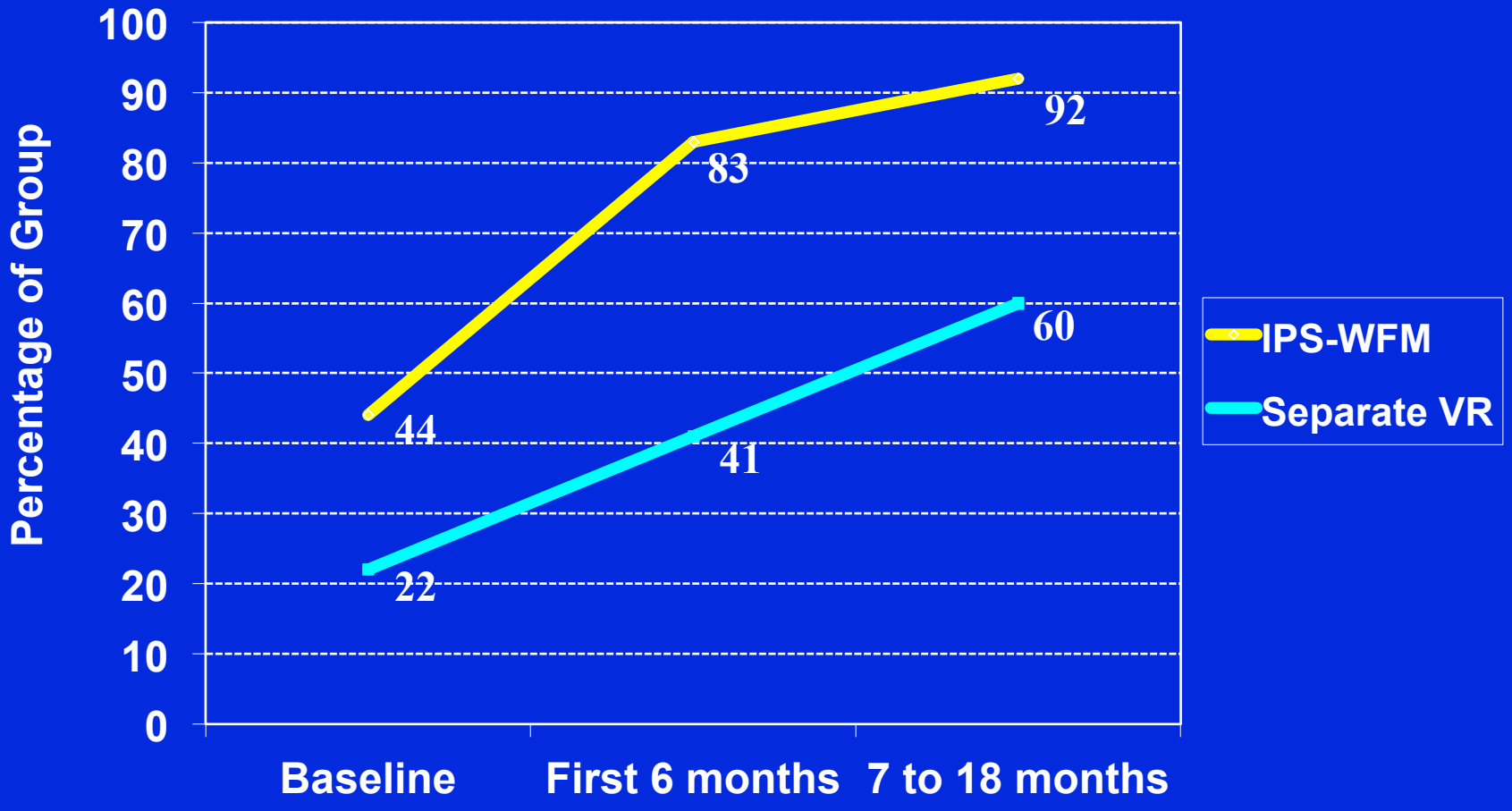
# Principles of Individual Placement and Support (IPS) Model (Robert Drake & Deborah Becker)

- Work rehabilitation is integral component of mental health treatment, not separate (job specialist w/in clinical team)
- Goal is competitive employment in typical work settings
- Emphasis is on obtaining jobs directly, rather than after lengthy pre-employment training

# Principles of Individual Placement and Support (IPS) Model (Robert Drake & Deborah Becker)

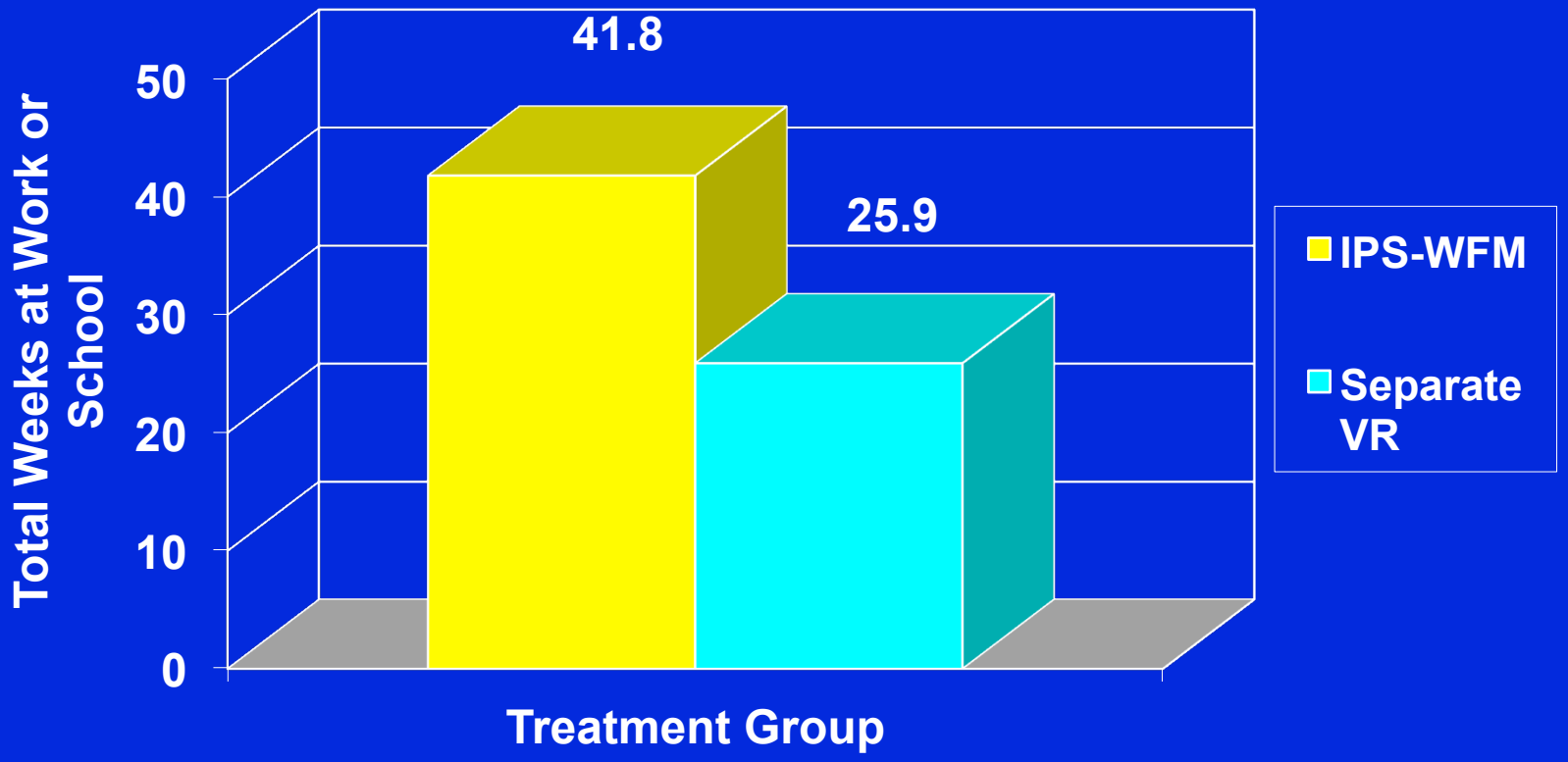
- Continuous vocational rehabilitation services based in real work experiences
- Follow-along support to sustain employment
- Services based on consumers' preferences and choices
- Outreach into community

# Percentage Returning to Competitive Work or Regular School (N = 69)

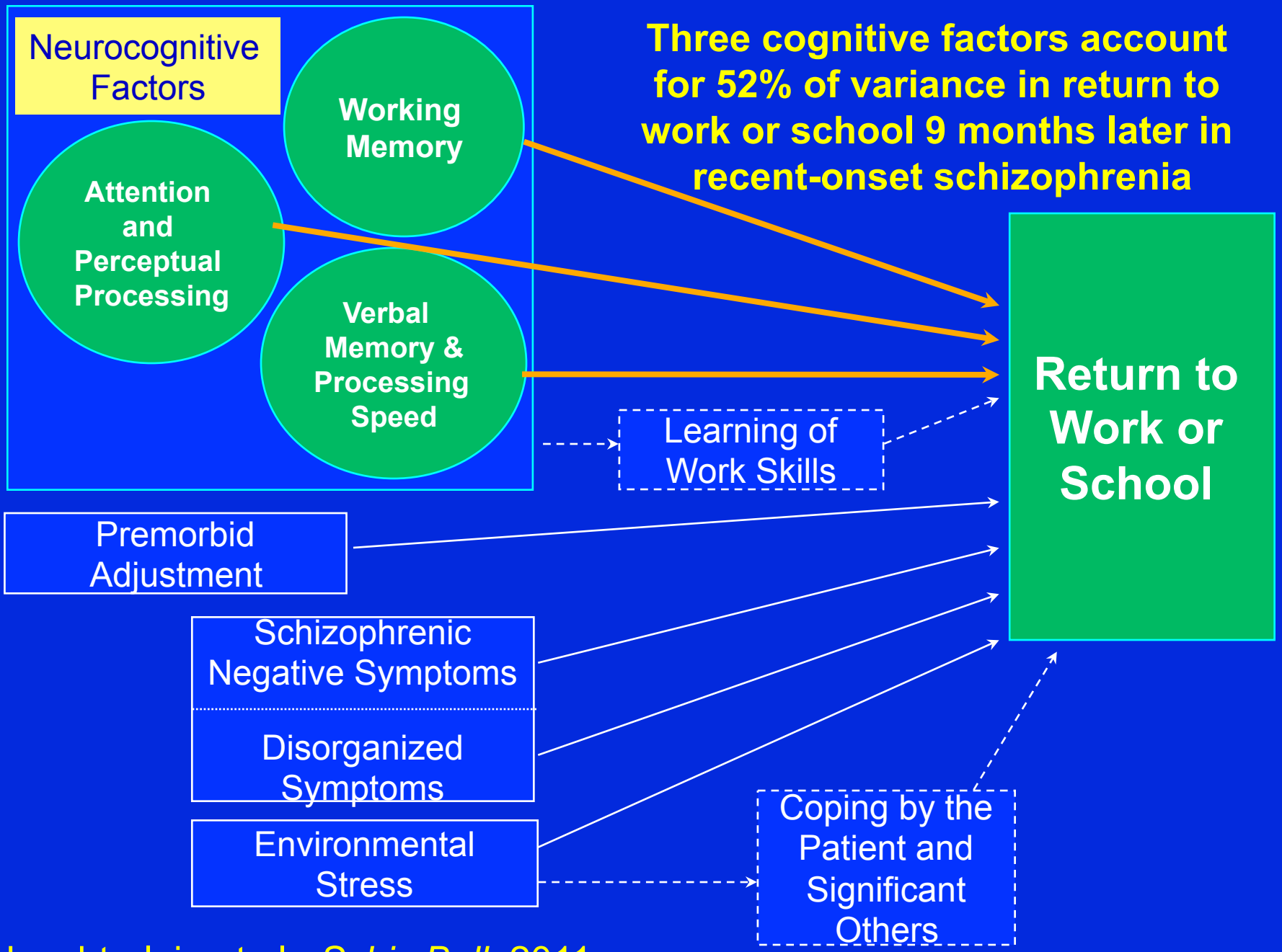



Adjusting for non-significant baseline differences, Wald $x^2 = 7.73$, $p < .0054$ for 1st 6 mos.; Wald $x^2 = 4.73$, $p < .03$ for next year

# Total Number of Weeks in Competitive Work or Regular School Over 18 Months (N = 69)




F = 8.43, p < .005




Nuechterlein et al., *Schiz Bull,* 2011

# Medication Non-Adherence (from Peter Weiden)

- 50% of patients have significant non-adherence within one year of beginning treatment.
- 75% within two years.
- 50% of the direct medical costs of psychiatric hospitalization attributed to non-adherence.

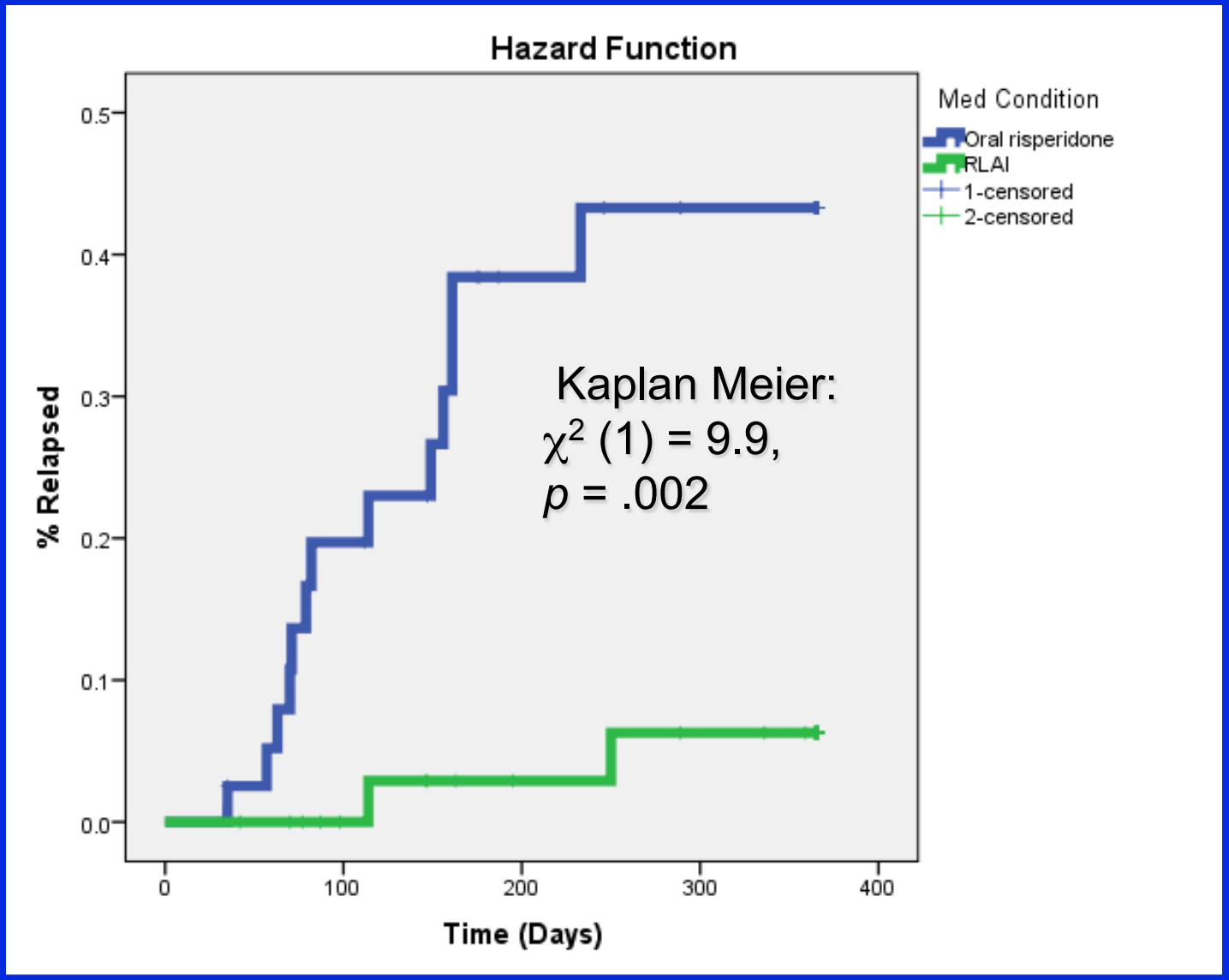
# UCLA Study Design

- 12-month randomized controlled trial with first-episode schizophrenia patients at the UCLA Aftercare Research Program

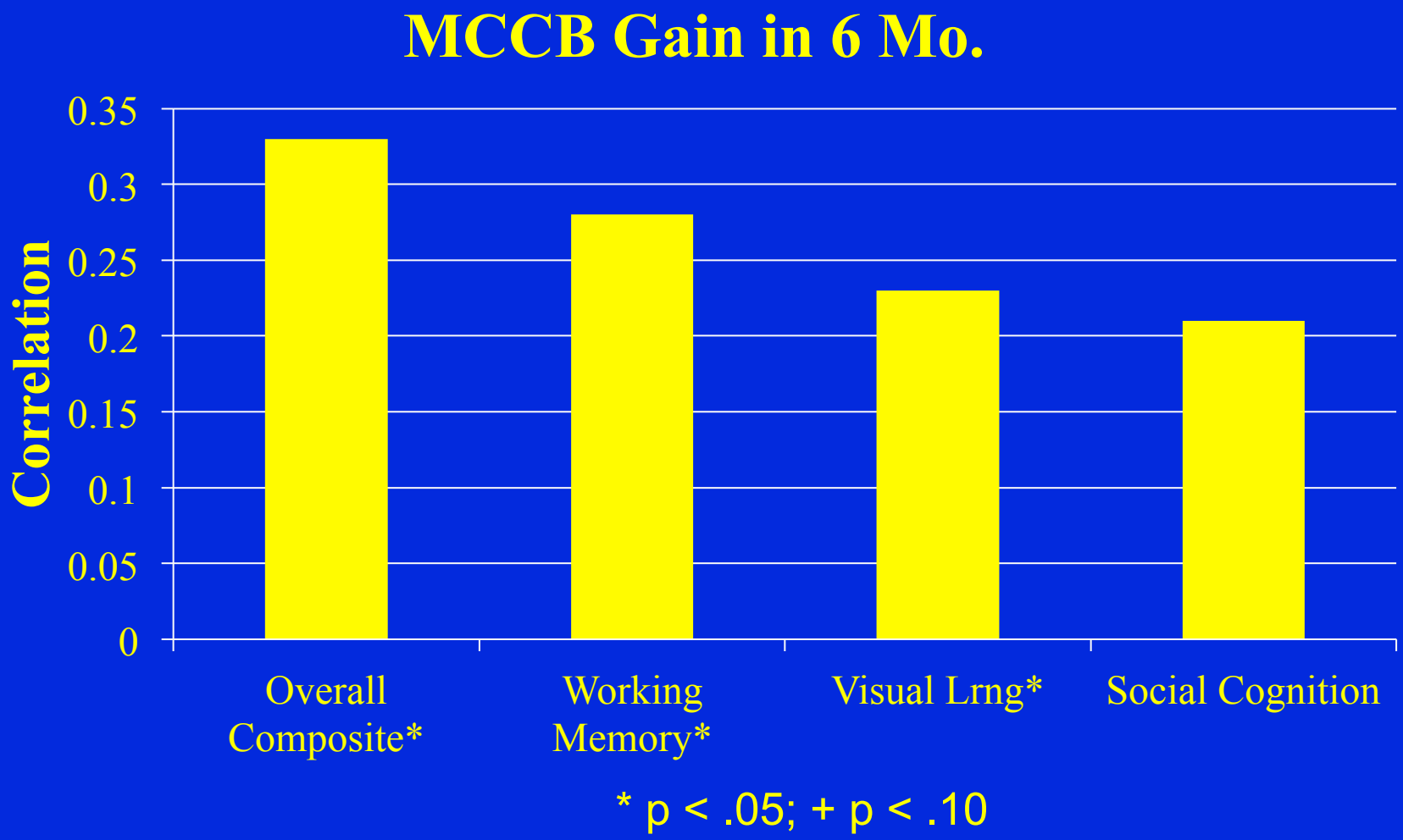
- Patients received Individual Placement and Support, a form of supported education and supported employment, to provide a context of active work rehabilitation

- After stabilization, patients were randomly assigned to the medication condition and the psychosocial treatment condition (2 X 2 design)

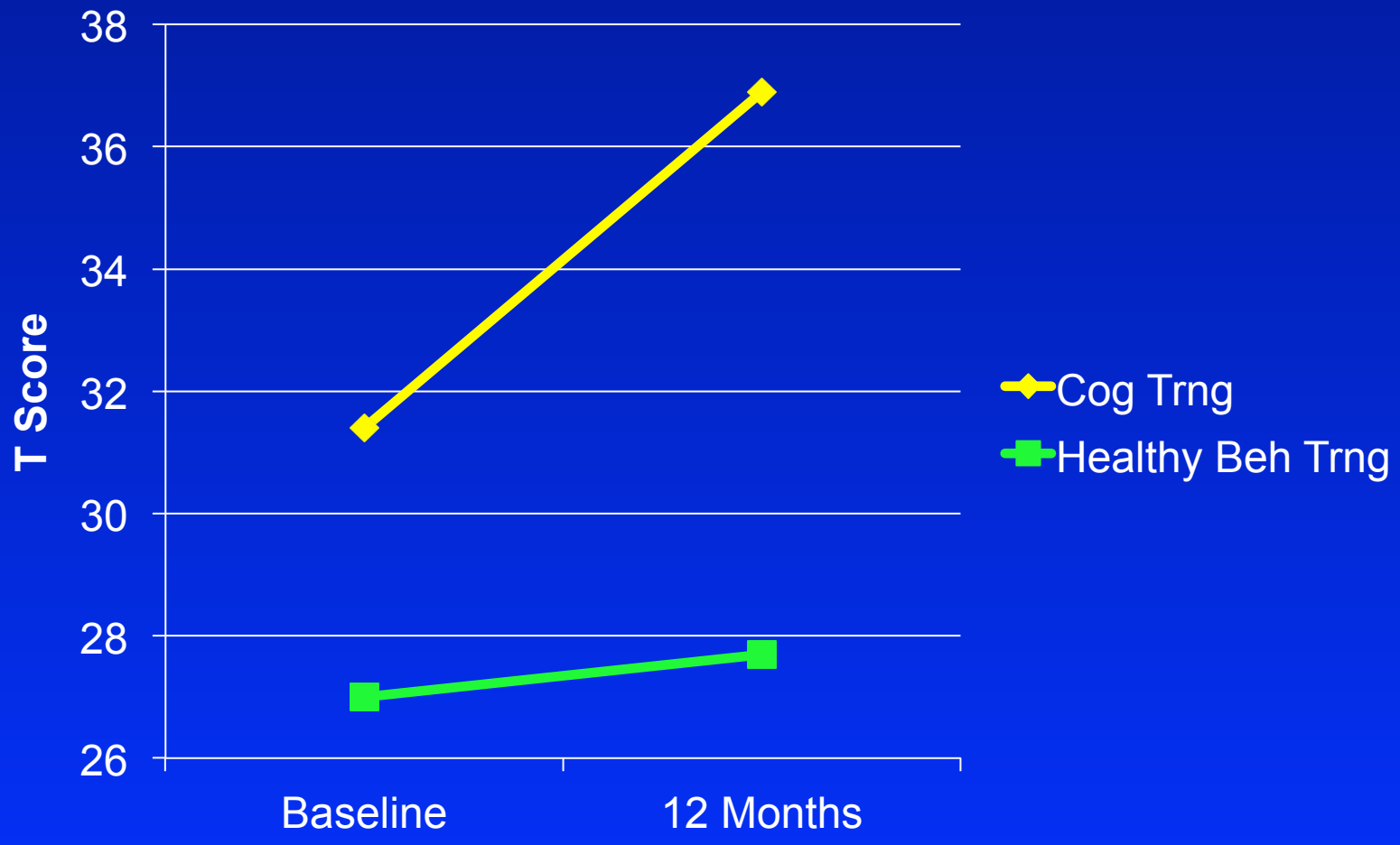
# UCLA First-Episode Randomized Controlled Trial of LAI vs. Oral Risperidone: Time to 1st Relapse



# Correlations between Antipsychotic Medication Adherence and Cognitive Gains in First-Episode Schizophrenia (n = 57 at 6 months)

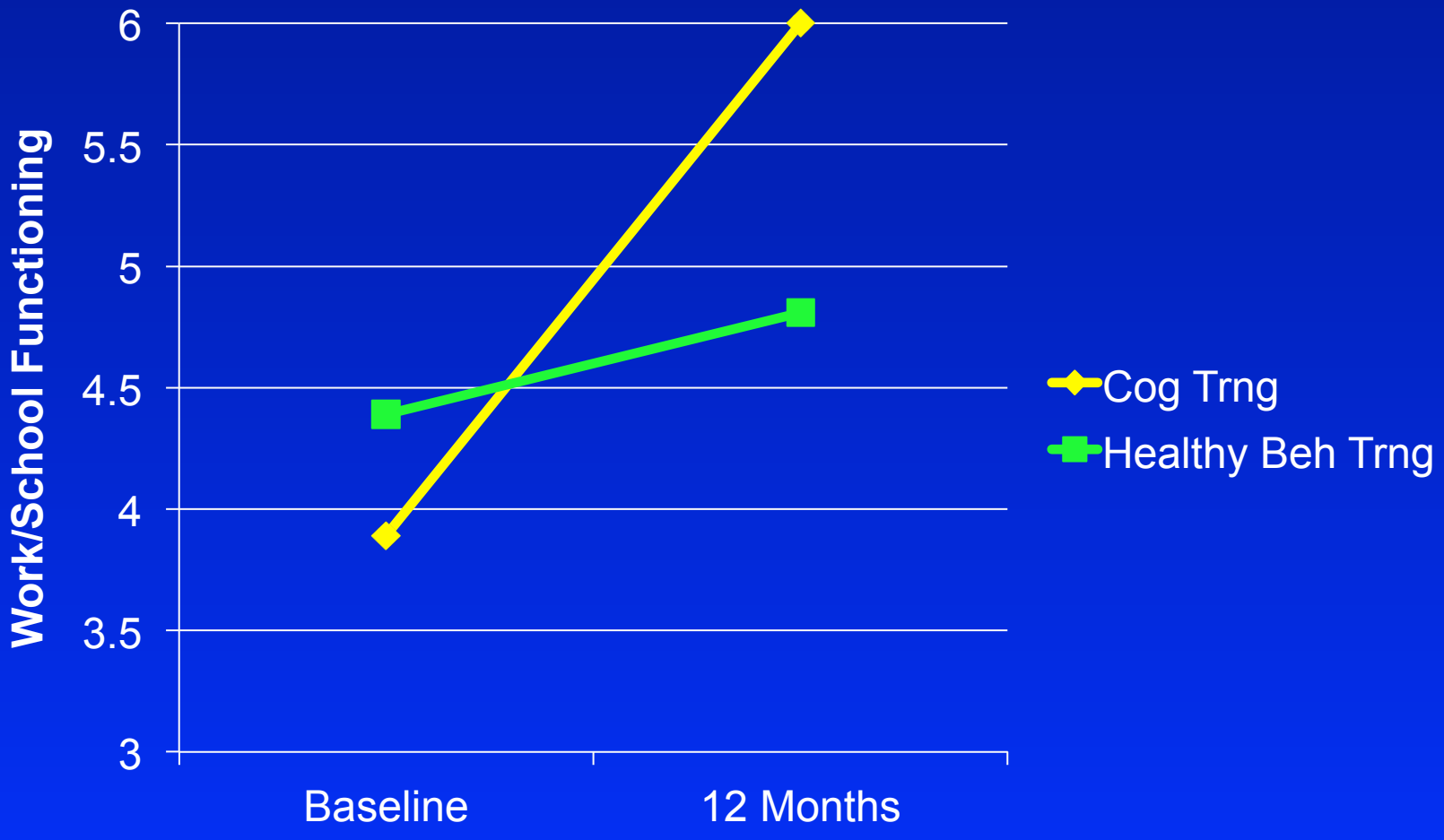


# MCCB Overall Composite Score Covarying for Medication Adherence and Finishing Full 1-Year Protocol (n = 46)




Group X Time interaction, p = .025

# Global Functioning Scale: Role Effect in 12 Months (n = 53)

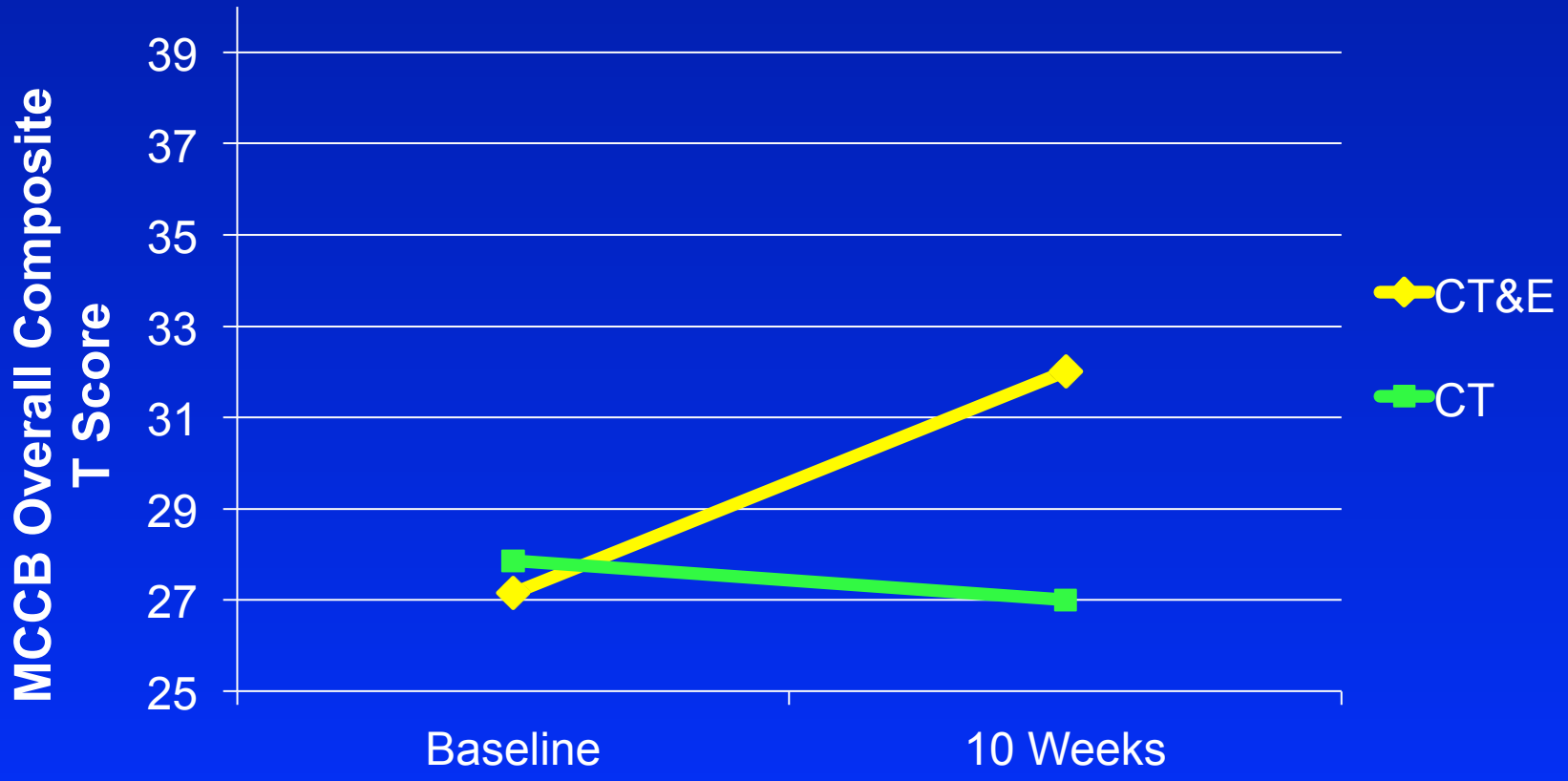



**Group X Time interaction, p = .03, Cohen's d = .62**

# Pilot Study of Adding Aerobic Exercise to Cognitive Training

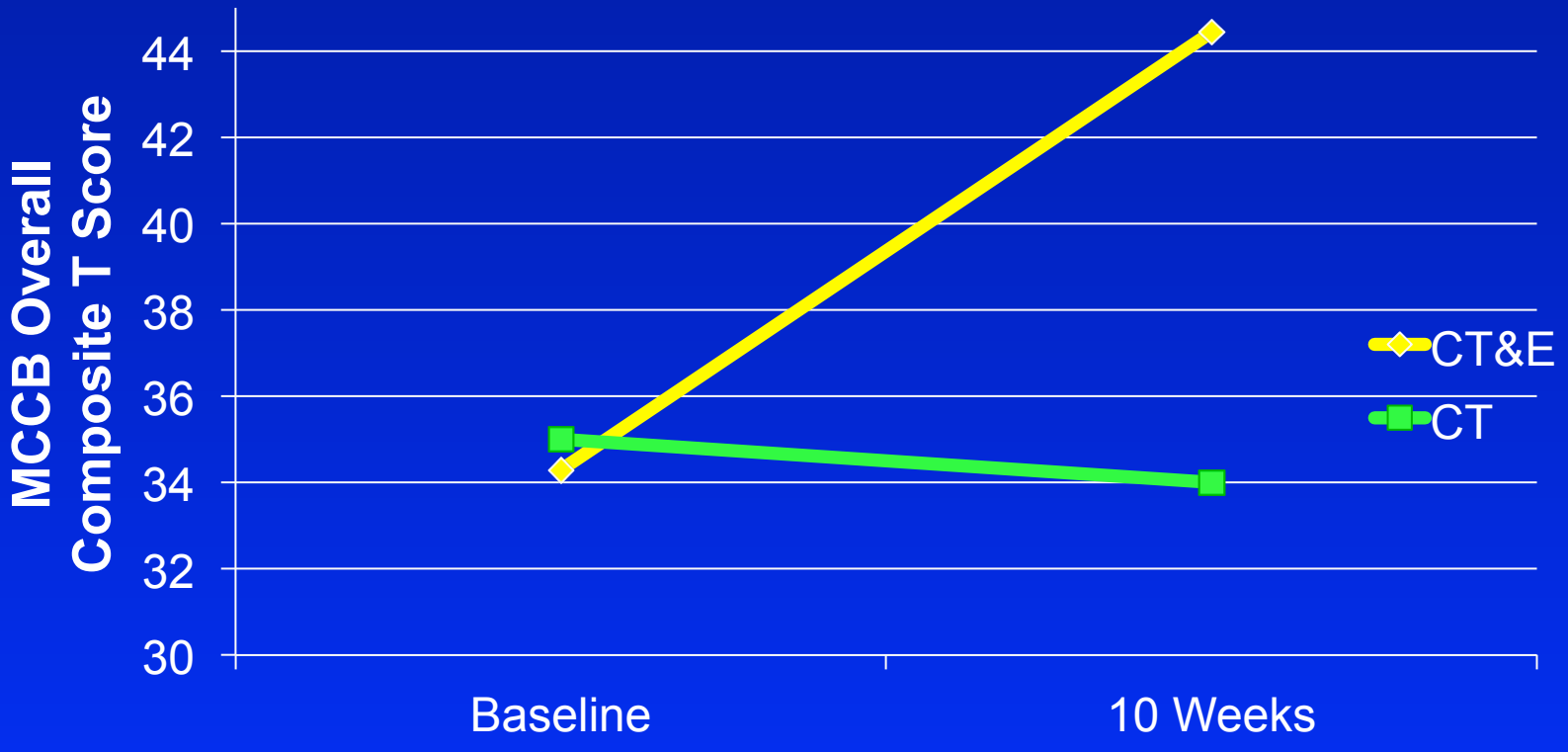
- Increasing evidence that aerobic exercise releases neurotrophic factors (e.g., brain-derived neurotrophic factor) that stimulate synaptic plasticity and enhance learning
- We hypothesize that adding regular aerobic exercise to neuroplasticity-based cognitive training will increase cognitive gains

# Cognitive Training & Exercise (CT&E) Might Enhance Impact on Global Cognition (MCCB Overall Composite Score) (n = 14)




Estimated effect size, Cohen's *f* = 0.48

# Cognitive Training & Exercise (CT&E) Might Enhance Impact on Social Cognition (n = 16)




Estimated effect size, Cohen's *f* = 0.65

# Overall Conclusions

- Supported education/employment can strikingly increase the proportion of patients who return to school or a job after an initial psychotic episode.

- Long-acting injectable antipsychotic medication is a promising strategy for reducing relapses and improving cognition and everyday functioning in recent-onset schizophrenia.

# Overall Conclusions

- Systematic cognitive training can impact cognitive functioning and everyday functioning in the early course of schizophrenia.

- Aerobic exercise and cognitive training might have synergistic effects on learning and overall cognitive functioning that enhance the impact of cognitive training alone.

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