

ALCOHOL AND TOBACCO USE AFTER LIVER TRANSPLANTATION FOR ALCOHOLIC LIVER DISEASE

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Why Study Alcoholic Use After Liver Transplantation?

- ALD makes up 20-30% of the liver transplant recipients
- Identify high risk recipients
- Drinking can impact medical outcomes

Post-transplant Alcohol Consumption

- 20% - 40% of patients transplanted for ALD return to drinking post-transplant
- Difficulties categorizing drinking as dichotomous event
- Quantity, frequency and pattern of use
- Multiple methods of alcohol use measurement

Specific Aim 1.

Identify the timing and characteristics of alcohol use

Specific Aim 2.

Predict alcohol use

Specific Aim 3.

Identify rates and patterns of tobacco use

Methods for Monitoring Alcohol Use

Following transplantation every 3-6 months:

- **Interviews/questionnaires**
 - Clinic interviews
 - Alcohol Timeline Follow-back (ATLFB)
 - Caregiver report
- **Biochemical markers**
 - Carbohydrate Deficient Transferrin (CDT)
 - Blood Alcohol Level (BAL)

Pre-transplant Characteristics of 160 Liver Recipients

	Percentage
Alcohol Histories	
Alcohol diagnosis, % dependence	74
Family member with alcoholism	63
≤ 6 Months sobriety pre-transplant	5
Rehabilitation	
Any form of rehabilitation	48
Mental Health	
Depressive disorder	40
Anxiety disorder	20
Substance use	41
IV Drug use	28
Other Axis I disorder	9

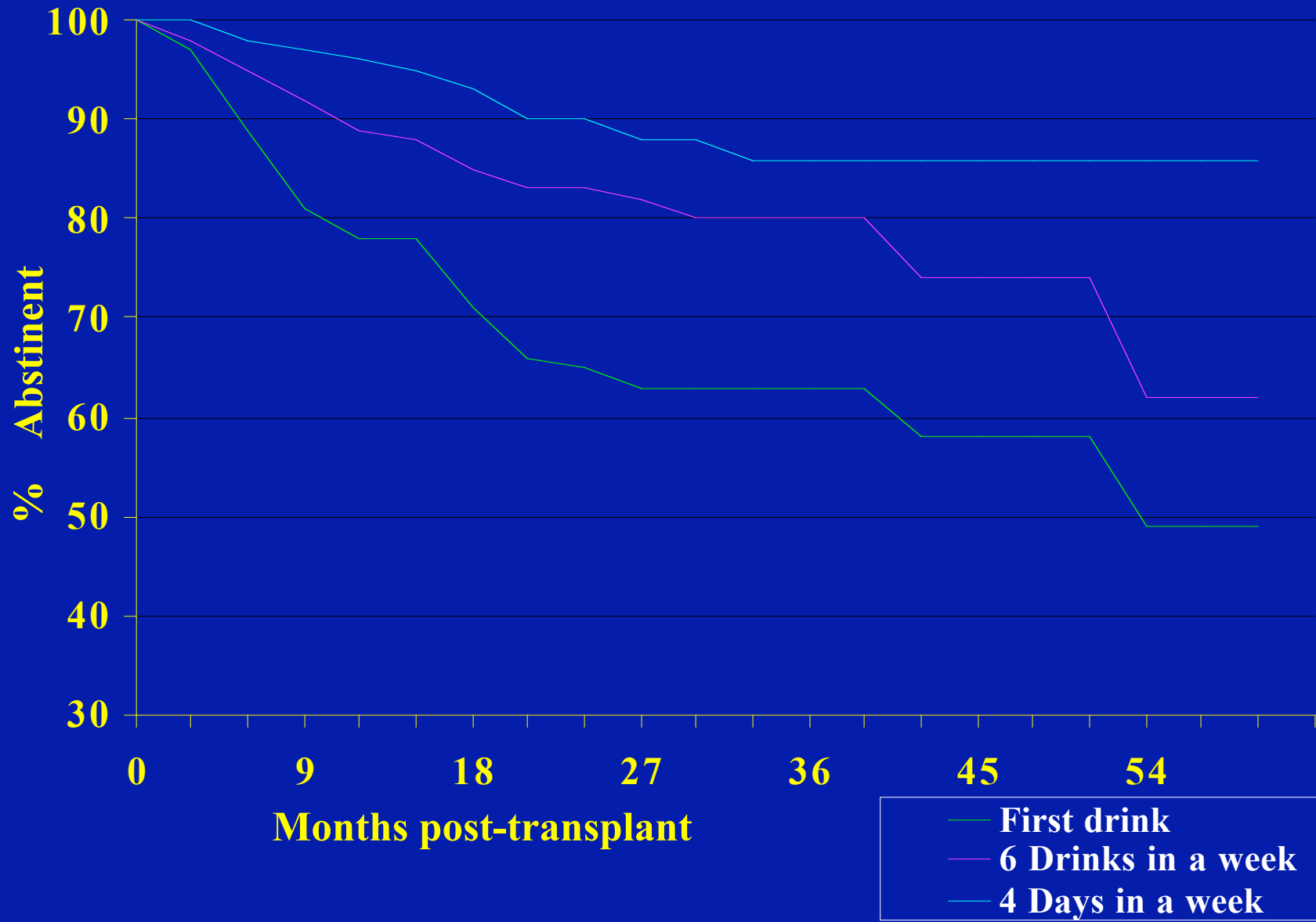
Background Characteristics of 160 Liver Recipients

Percentage

Sociodemographic

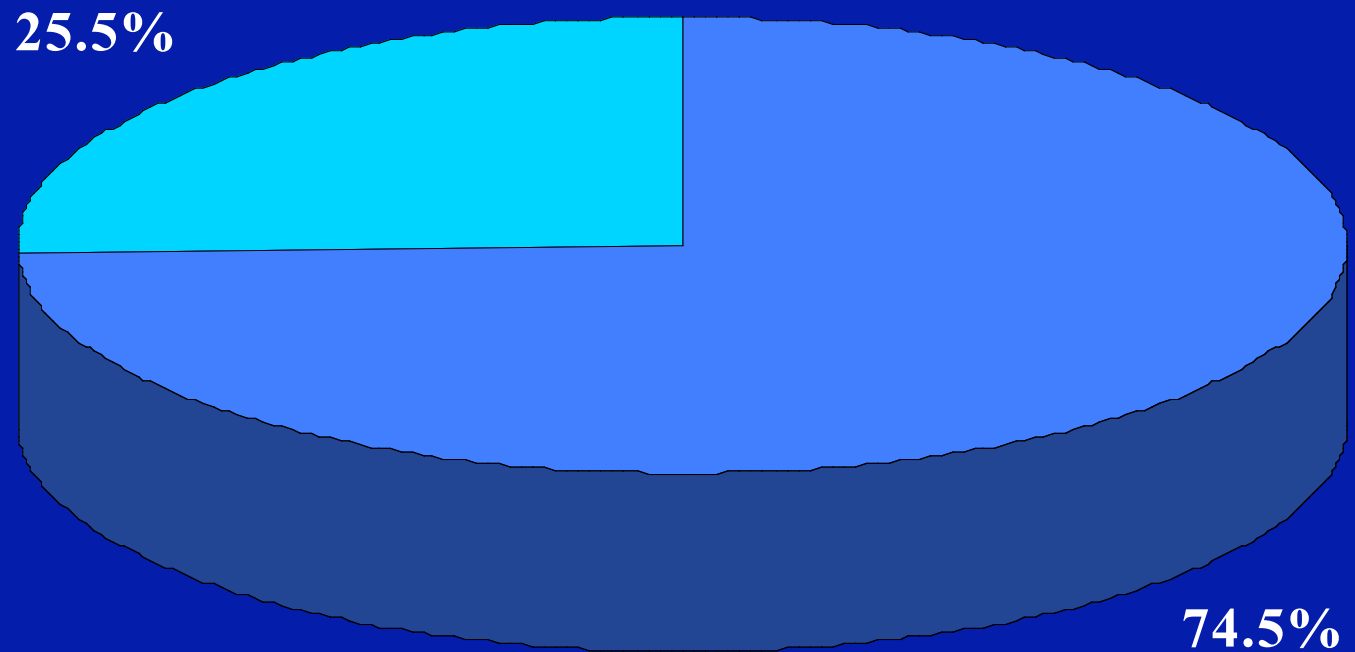
Gender, % male	85
Age, % \leq 50	61
Race, % Caucasian	95
Marital status, % married	51
Education, % \leq high school	50
Last occupation, % nonprofessional	74
Current residence, % $>$ 2 years	79

Time to Specific Alcohol Use Outcomes



Consecutive Days of Alcohol Use

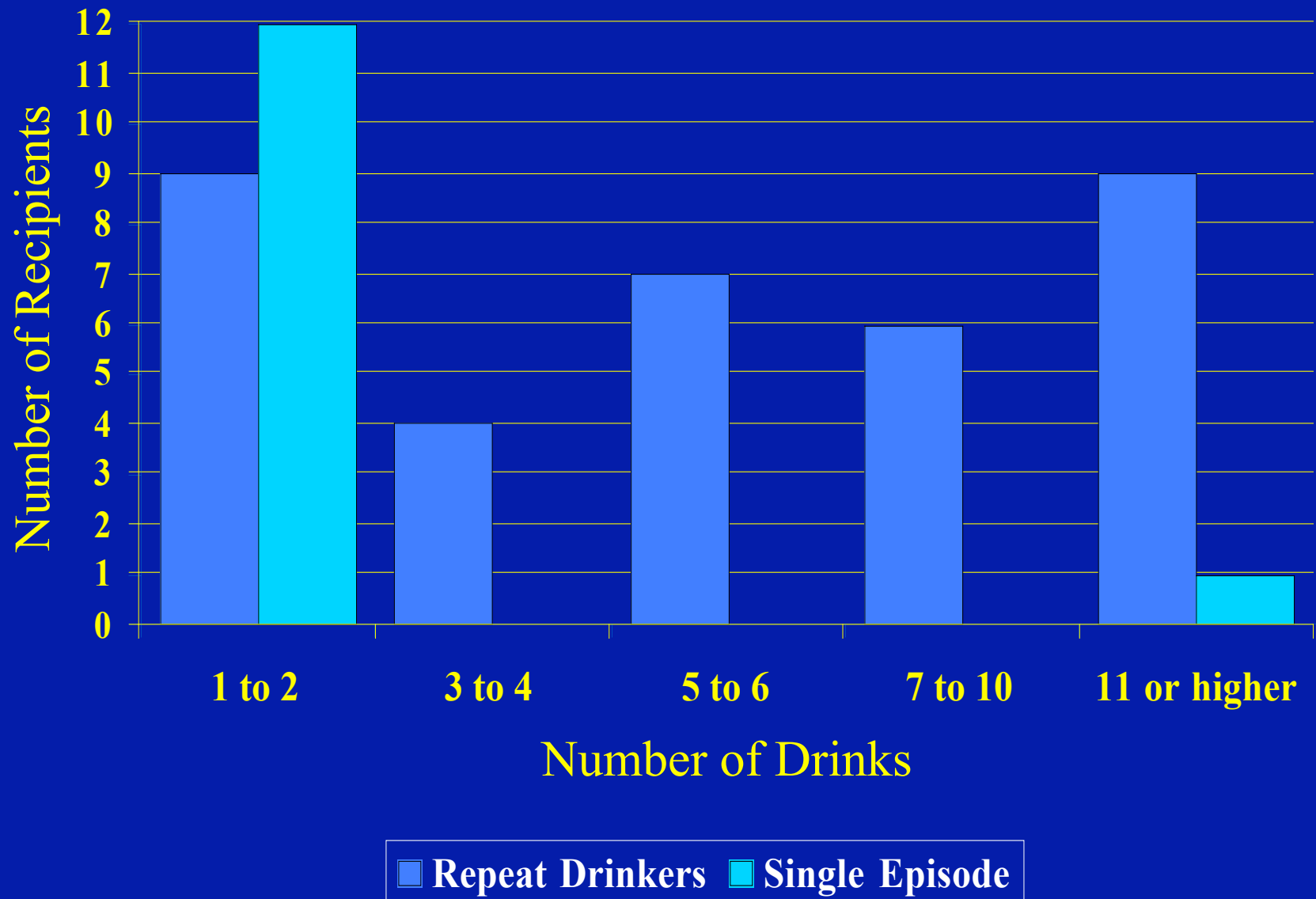
(47 Recipients Consumed Alcohol)



■ 1 to 3 days

■ 4 or more days

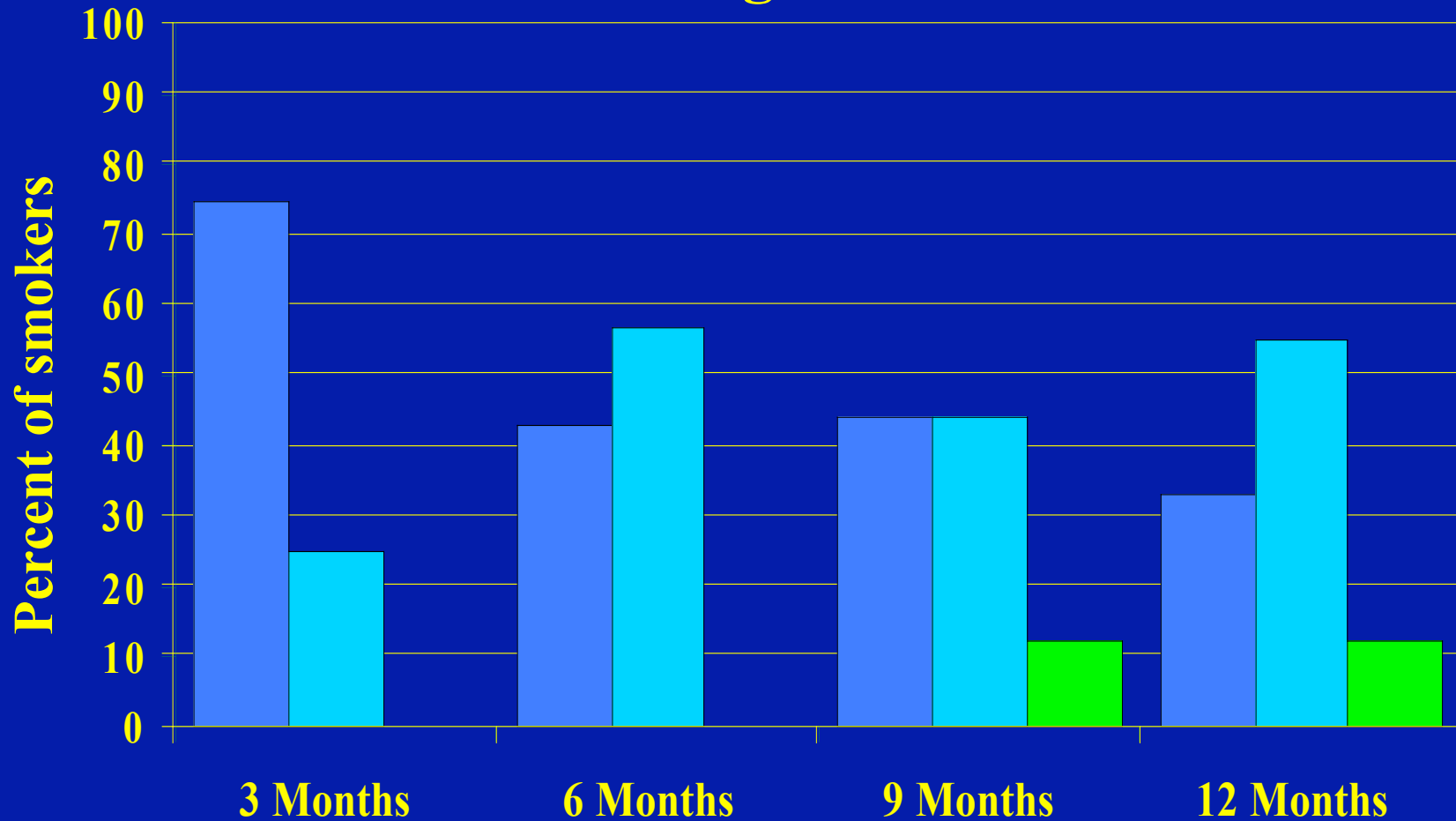
Drinks Consumed at Heaviest Episode (n=47)



Cumulative Prevalence of Tobacco Use In ALD Recipients



Amounts of Tobacco Use In ALD Recipients: Numbers of cigarettes smoked



■ 10 or less ■ 11 to 20 ■ 21 to 30

Psycho-social Variables Analyzed as Risk Factors for Alcohol Use

Demographic

- gender, age, race, religion, & marital status

Socio-economic

- level of education, occupation, number in household, & years at residency

Alcohol history

- years of drinking, length of sobriety, family history, alcohol diagnosis, & rehabilitation experience

Psychiatric history

- depression, anxiety, other substance use, other Axis I disorders

Pre-transplant Characteristics

Hazards Ratio

Alcohol Histories

Alcohol Dependence	2.3	p=.04
Family member with alcoholism	1.3	
Length of sobriety pre-transplant	0.98	p=.01
Years of heavy drinking	0.98	

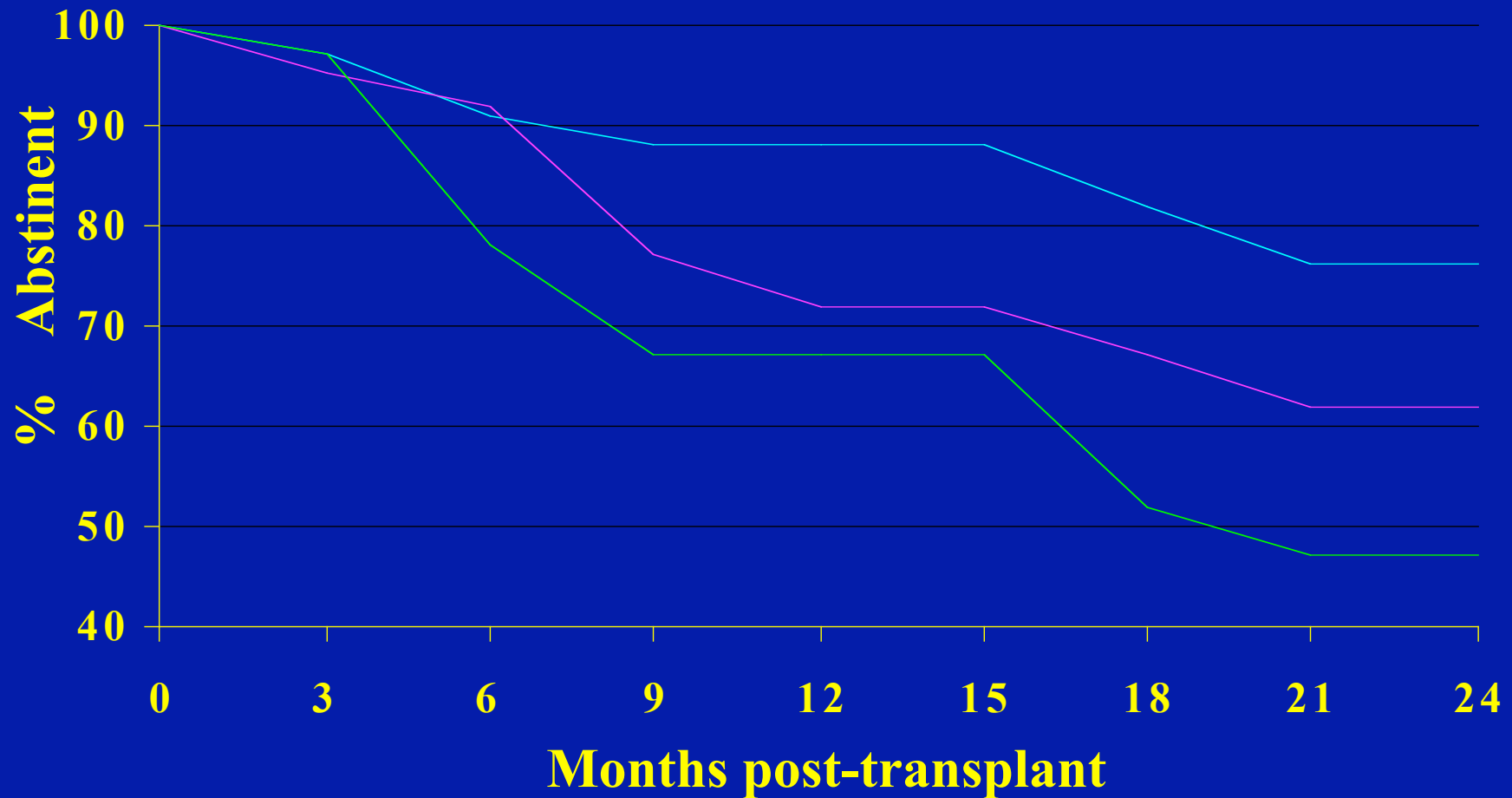
Rehabilitation

Any form of rehabilitation	2.2	p=.01
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Mental Health

Depressive disorder	1.5	
Anxiety disorder	0.76	
Substance use	1.8	
IV Drug use	1.2	

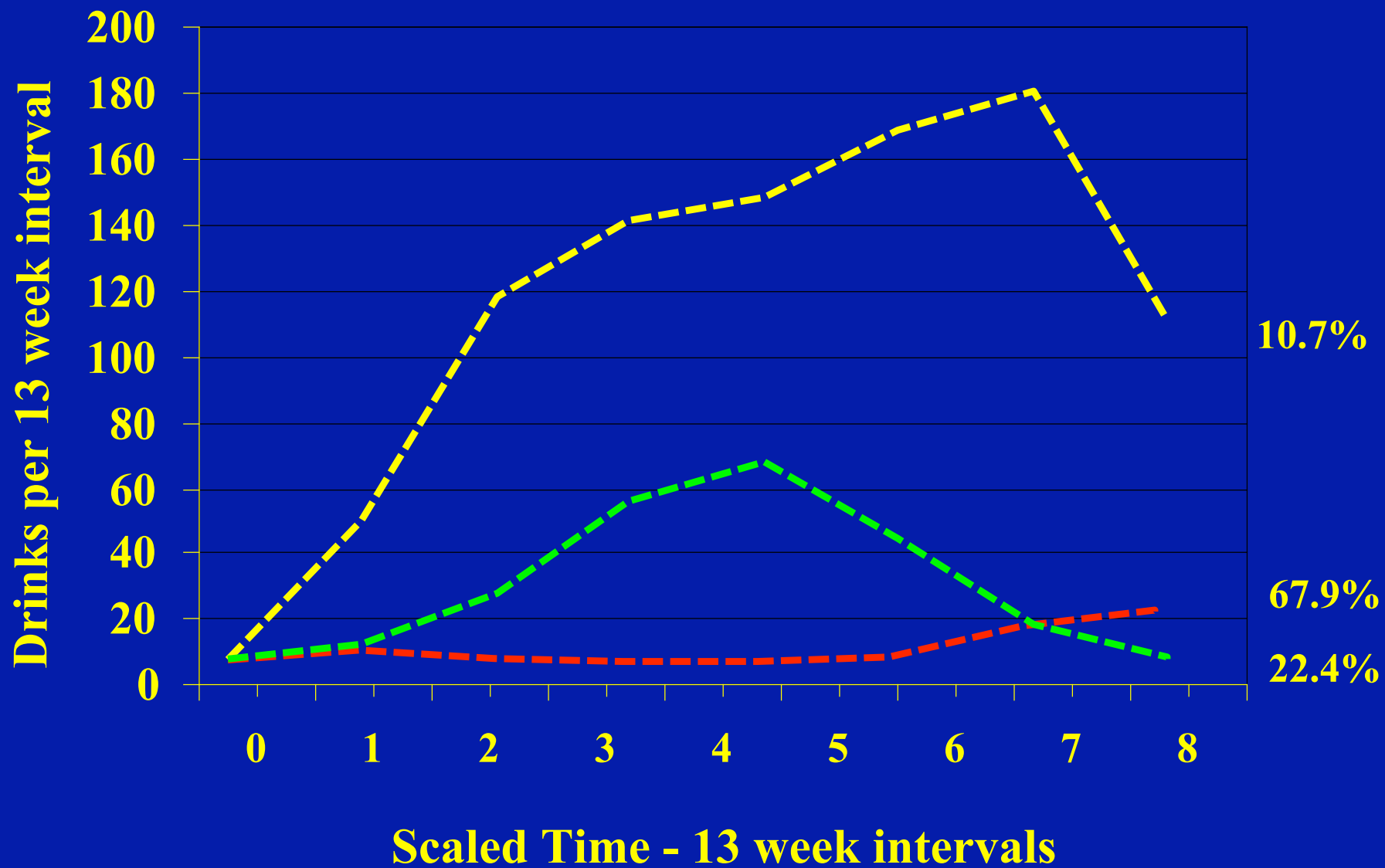
Effects of Total Number of Risk Factors on Time to First Alcohol Use



— 1 Risk Factor — 2 Risk Factors — 3 Risk Factors

Drinking Trajectories

n=27



Summary

- **Assess for**
 - psychiatric alcohol diagnoses
 - family history
 - rehabilitation experience
 - other substance use
- **These characteristics not categorically poor candidates**
- **Clinical interviews are essential in monitoring alcohol use**
- **Early surveillance required**

Trail Slide

Andrea DiMartini

18 slides + trail slide

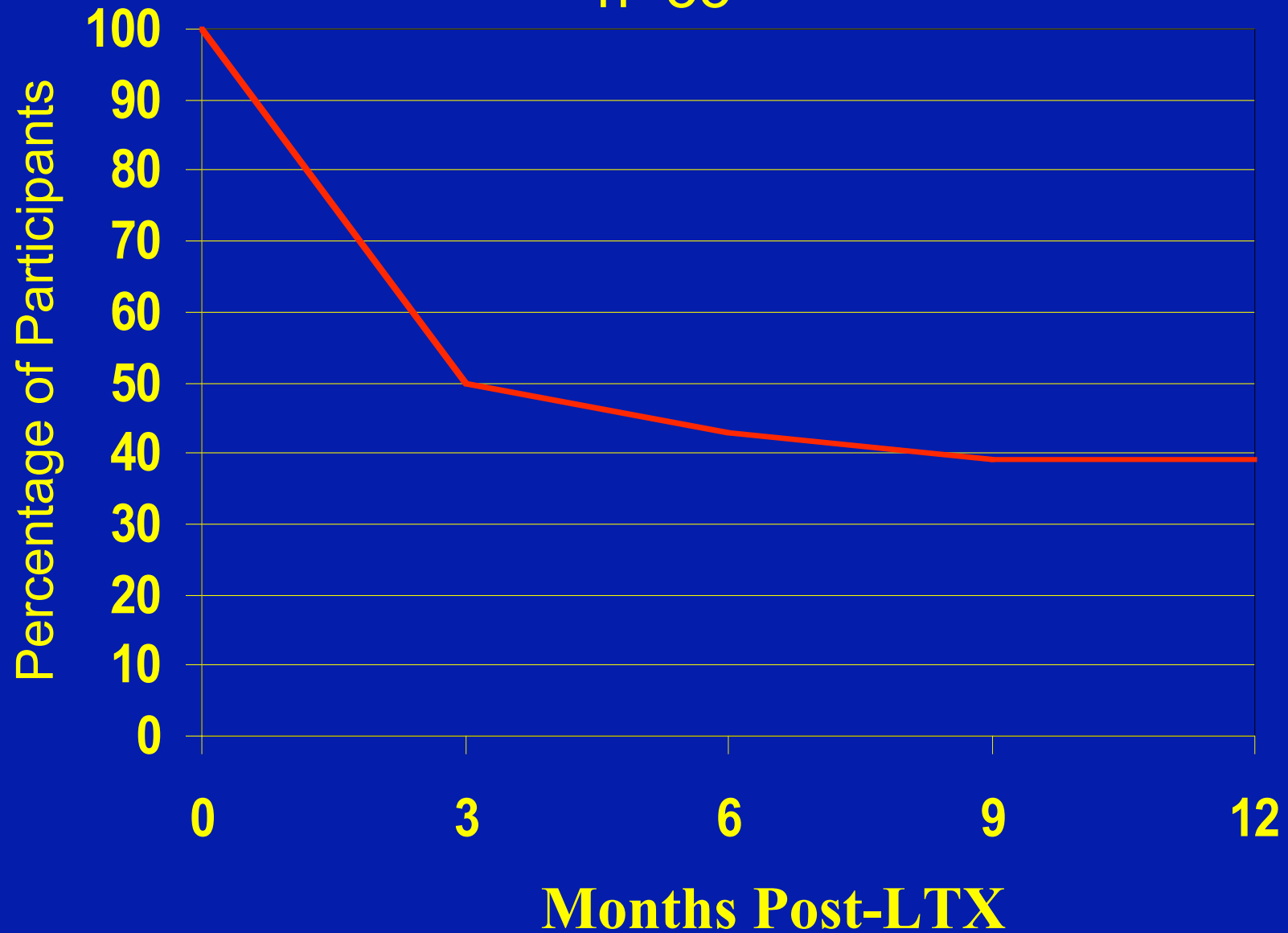
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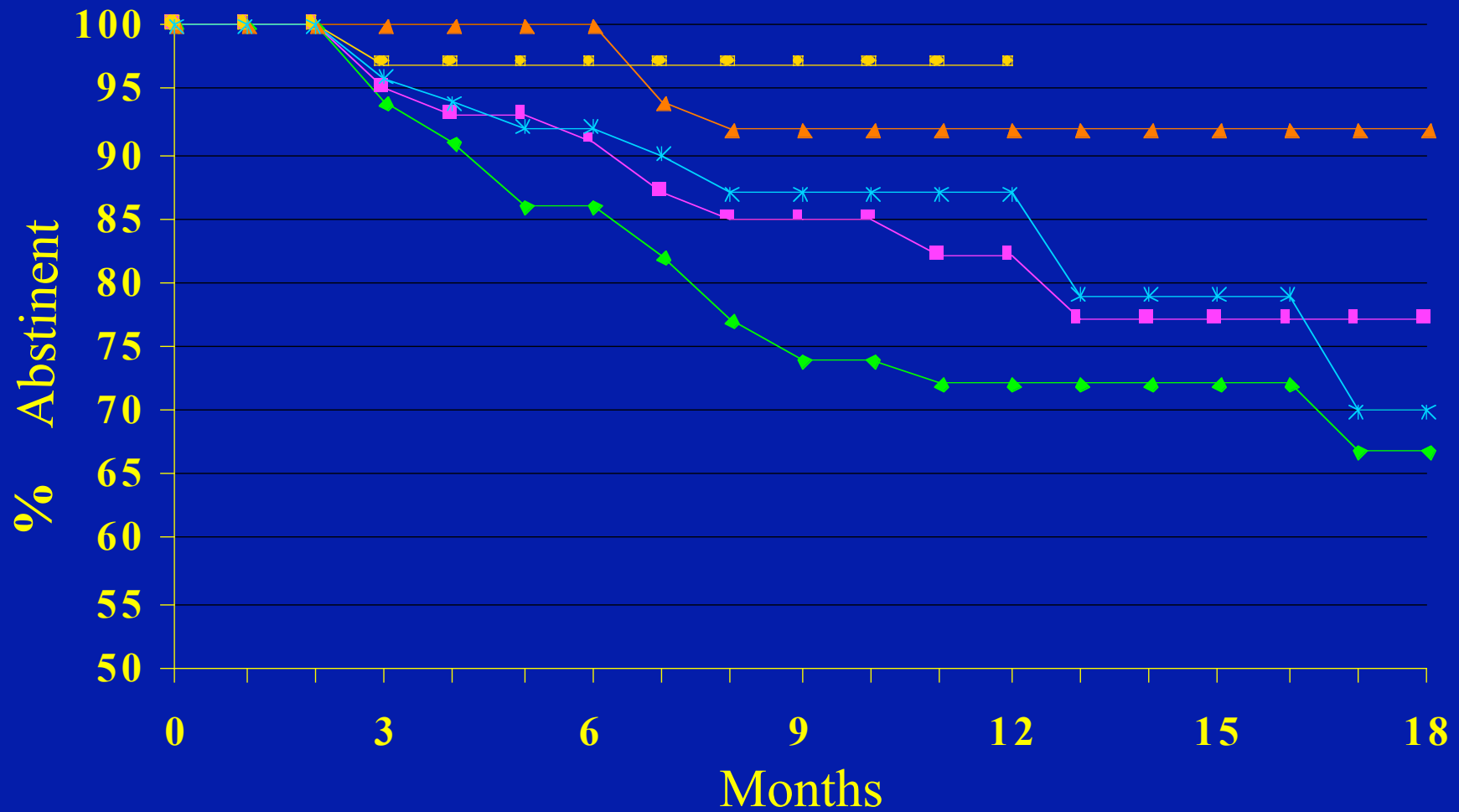
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Rate of Smoking Post-LTX

n=33



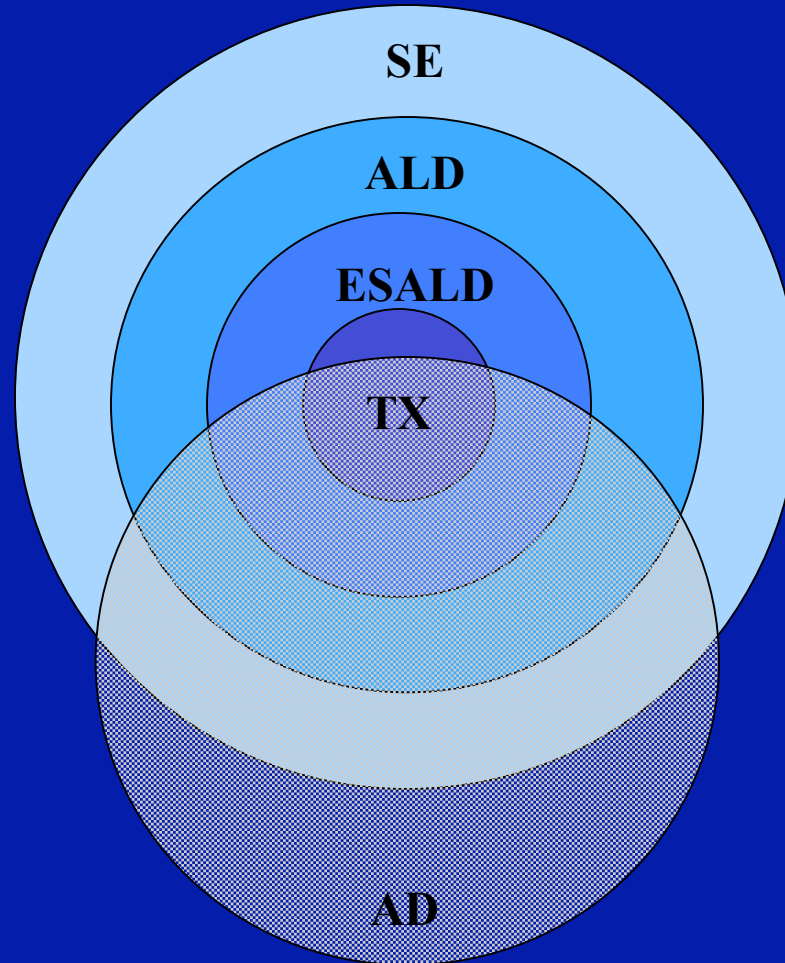
Time to First Drinking Episode: Comparison of Various Monitoring Methods



—◆— Clinic Report —■— ATLFB —▲— BAL —■— CDT —*— Caregiver

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Behavioral vs Physical Diagnoses



**SE: Sufficient Ethanol Exposure; ALD: Alcoholic Liver Disease;
ESALD: End-Stage Alcoholic Liver Disease;
TX: Liver Transplant; AD: Alcohol Dependence**