

NCSCG
8TH ANNUAL
LIVER SYMPOSIUM

JANUARY 21, 2023
HOTEL NIA | MENLO PARK, CA

Transplant Selection Simulation

Early LT for ALD

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Disclosures

- ▶ Aparna Goel, MD – None
- ▶ Courtney Sherman, MD - None

Learning Objectives

- ▶ **By the end of this discussion, you should be able to:**
 - ▶ Understand key selection criteria for early liver transplantation for ALD
 - ▶ Understand predictive factors for relapse and other post-transplant outcomes
 - ▶ Experience a democratic transplant selection simulation

Welcome to the Transplant Selection Simulation

- ▶ Why are we doing this?
- ▶ Limited data
- ▶ Opportunity for “exchange of ideas”
- ▶ Chance to apply emerging knowledge to practical scenarios
- ▶ Chance to assess *democratic* method of selection

Simulation Format

- ▶ Case presentation (Disclaimer: inspired by real cases)
 - ▶ Medical/Surgical history
 - ▶ Psychosocial history
- ▶ Audience questions/discussion
- ▶ Real-time Polling with Poll Everywhere
 - ▶ **pollev.com/ncscgliver**



Demographics

When poll is active respond at

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Text **ncscgliver** to **22333**



Case 1

8

- ▶ 48 y/o Caucasian woman presenting with 3 weeks of new-onset jaundice c/w severe AH with brief ICU stay for hypotension
- ▶ Steroid nonresponder (Lille 0.92)
- ▶ Cultures negative, needs HD, off antibiotics
- ▶ PMH/PSH: none
- ▶ No prior liver disease or h/o alcohol-related hospitalizations

- ▶ Exam: VSS, BMI 16.5, lungs CTA, abd mildly distended, A+Ox3, no asterixis
- ▶ Imaging: +HSM, nodular liver, perihepatic ascites

- ▶ LT eval: normal TTE & nuclear stress test

WBC 38.0

Hgb 10.3

TB/DB 33/24

AST/ALT 61/15

INR 2.6

Na 129

Cr 2.9

MELD-Na 40

Case 1

- ▶ Accepts diagnosis of AUD + ALD; ***“Quitting will take some work.”***
- ▶ Last drink: 3 weeks ago
- ▶ Drinking since 20s, heavier in past 8 years with ~8 drinks/d (vodka+seltzer) due to stress & “beach culture”; hid drinking from spouse (bottles under bed, drinking late at night, etc)
- ▶ Estranged from family 1 year ago regarding inheritance → ↑ drinking to cope
- ▶ Prior alcohol rehab: none; willing to enroll in rehab after LT
- ▶ Other substance use: none

- ▶ Married with supportive spouse
- ▶ Employment: works full-time
- ▶ No social, job or legal consequences
- ▶ FHx: +Father and GF with AUD
- ▶ Psychiatric: anorexia nervosa in college, in remission

Case 1

10

Questions / Comments from the Committee

Case 1 – Summary & Evidence

Positives

- ▶ Accepts dx & treatment plan
- ▶ 1st decompensation
- ▶ No prior rehab
- ▶ Worked full-time
- ▶ “Older” age

Negatives

- ▶ Drinking at time of admission
- ▶ No prolonged period of abstinence
- ▶ Strong family h/o AUD
- ▶ h/o anorexia

Relapse Scores

Within Dallas: Yes

SALT 0 (0-11, low risk)

SIPAT 19 (7-20, Good candidate)

QuickTrans 240 (≥ 220 , max score 250)

Dallas Consensus Conference on LT for AH

Criteria Related to AH

1 st presentation with decompensated AH
Absence of severe medical comorbidities
Non-response to medical tx

Criteria Related to AUD

Establish acceptable risk of relapse by multidisciplinary assessment (SW, addiction specialist)	Commitment of pt/family to sobriety and agreement to lifelong abstinence
Direct assessment of pt possible by addiction specialist (pt is coherent)	Acceptance of dx/insight
Max of 1 prior failed attempt at rehabilitation	Close, supportive family or caregivers
Lacks other active substance use/dependency	Lacks active, untreated psych disorder

SALT Score

Variable	Points
>10 drinks/day at presentation	+4
≥2 prior failed rehab attempts	+4
Any h/o prior alcohol-related legal issues	+2
H/o non-THC illicit substance abuse	+1

- **SALT ≥5** had 25% positive predictive value
- **SALT <5** had 95% negative predictive value

Stanford Integrated Psychosocial Assessment for Transplant (SIPAT)

Psychosocial Domains

Patient's Readiness Level and Illness Management

Social Support System Level of Readiness

Psychosocial Stability and Psychopathology

Lifestyle and Effect of Substance Use

SIPAT TOTAL Score: _____

SIPAT Score Interpretation

0 – 6

Excellent candidate

- Recommend to list without reservations.

7 – 20

Good candidate

- Recommend to list – although monitoring of identified risk factors may be required.

21 – 39

Minimally Acceptable Candidate

- Consider Listing. Identified risk factors must be satisfactorily addressed before representing for consideration.

40 – 69

Poor Candidate

- Recommend deferral while identified risks are satisfactorily addressed.

> 70

High Risk candidate, significant risks identified

- Surgery is not recommended while identified risk factors continue to be present.

QuickTrans Score

- ▶ Includes objective and subjective scoring
- ▶ Patient factors:
 - ▶ motivation - understanding severity of disease and motivation in LT
 - ▶ adherence to medical projects
 - ▶ dynamism – has projects for the future, post-LT
- ▶ Family support factors:
 - ▶ presence of friends/family
 - ▶ Alcohol problems in relatives
 - ▶ Question asked by relatives – family interest in pt condition and medical care

Summary of evaluation

≤200: patient should not be considered for LT

Between 200-220: second discussion needed prior to LT decision

≥220: considered candidate for early LT

Accept Candidate for Early LT?

Case 1

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(1)YES

(2)NO

Case 1: Accept candidate for early LT?

Yes (1)

No (2)

Case 1: Accept candidate for early LT?

Yes (1)

No (2)

Case 1: Accept candidate for early LT?

Yes (1)

No (2)

Case 1 - Outcome

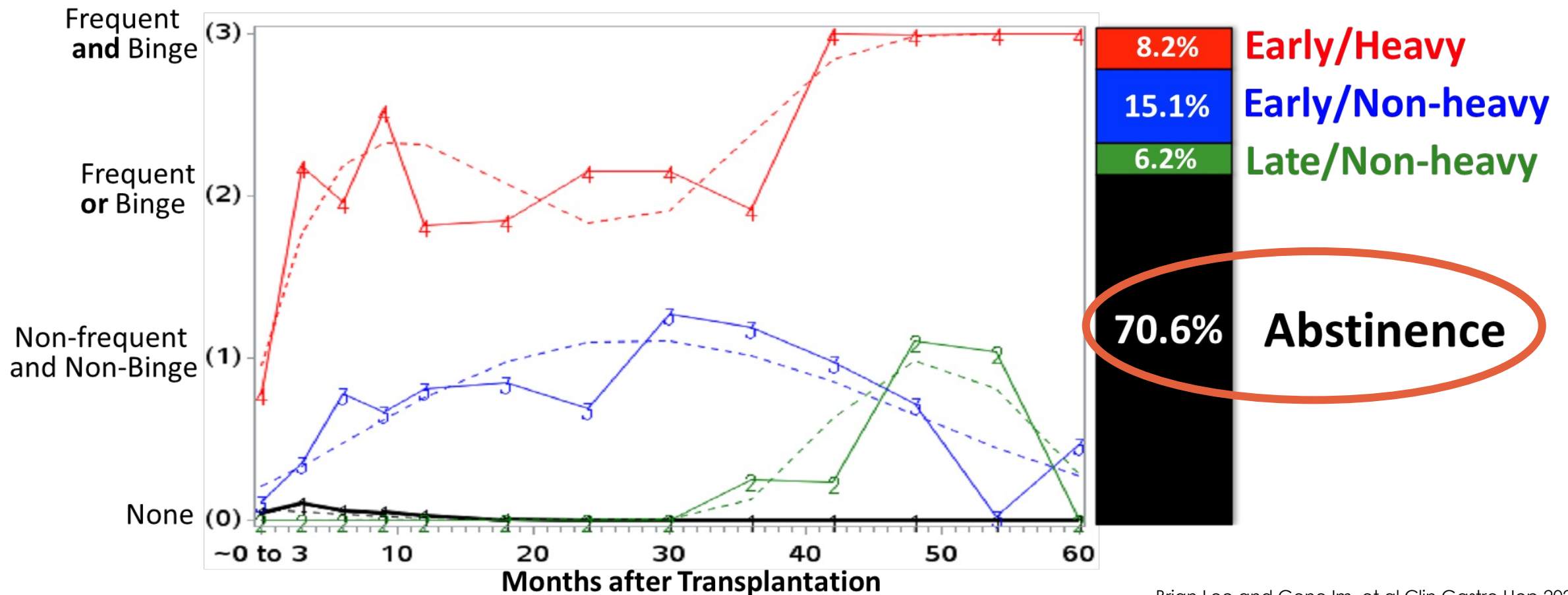
- ▶ Early LT during index hospitalization
- ▶ Explant: G3/S4 AH + cirrhosis

Post-LT course

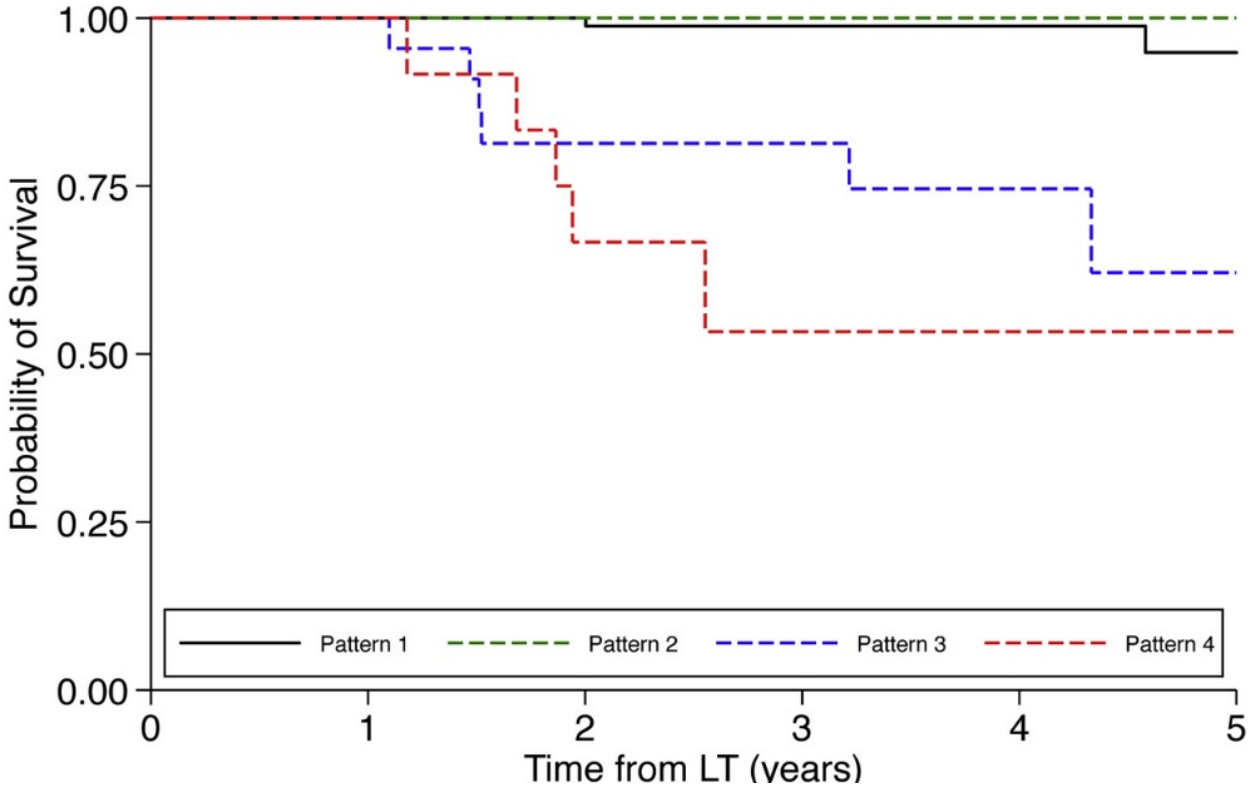
- Completed alcohol rehab with continued participation
- 5 years post-LT
- No rejection
- No alcohol use (interview and PEth)

Patterns of Alcohol Use After Early Liver Transplantation for Alcohol-associated Hepatitis

Alcohol use



Patterns of Alcohol Use After Early Liver Transplantation for Alcohol-associated Hepatitis



	1-Year Survival (95% CI)	3-Year Survival (95% CI)	5-Year Survival (95% CI)
Pattern 1 (n=103) [Abstinence]	100% (--)	99% (92%-100%)	95% (78%-99%)
Pattern 2 (n=9) [Late Non-Heavy Alcohol Use]	100% (--)	100% (--)	100% (--)
Pattern 3 (n=22) [Early Non-Heavy Alcohol Use]	100% (--)	81% (58%-92%)	62% (30%-83%)
Pattern 4 (n=12) [Early Heavy Alcohol Use]	100% (--)	53% (20%-78%)	53% (20%-78%)
Log Rank p-value	--	<0.001	<0.001

Case 2

- 28 y/o Asian man transferred for severe AH with non-response to steroids.
- h/o UGIB admission 3 years ago outside US (details unclear)
- Exam: VSS, BMI 18, A+Ox2 with +asterixis, lungs CTA, distended abdomen, 1+ LE edema
- Imaging: Hepatomegaly, moderate ascites and +TIPS
- LT eval: normal TTE & nuclear stress test

WBC 12.4

Hgb 10.3

TB/DB 54/36

AST/ALT 196/73

INR 3.3

Na 132

Cr 1.7

MELD-Na 40

Case 2

- ▶ Accepts diagnosis of ALD but asks about role of DILI; ***“While I don’t think I need rehab, I’ll do whatever is required to get a liver.”***
- ▶ Last drink: 1 week ago
- ▶ Reports 3 drinks/day plus non-alcoholic beers since age 14
- ▶ Prior alcohol rehab: attended AA for 2 months a year ago
- ▶ Other substance use: occasional marijuana, distant h/o cigarette use

- ▶ Married; spouse at bedside regularly
- ▶ On disability for work-related back injury
- ▶ FHx: None
- ▶ Psychiatric: None

Case 2

Questions / Comments from the Committee

Case 2 – Summary & Evidence

Positives

- ▶ Accepts dx & treatment plan
- ▶ Strong support

Negatives

- ▶ Not 1st decompensating event
- ▶ Young age
- ▶ Not working
- ▶ No prolonged period of abstinence
- ▶ Strong family h/o AUD

Relapse Scores

Within Dallas: No

SALT 0 (low risk, 0-11)

SIPAT 30 (21-39, Minimally acceptable candidate)

QuickTrans 160 (<200, decline for early LT)

Accept Candidate for Early LT?

Case 2

When poll is active respond at

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(1)YES

(2)NO

Case 2: Accept candidate for early LT?

Yes

No

Case 2: Accept candidate for early LT?

Yes

No

Case 2: Accept candidate for early LT?

Yes

No

Case 2 - Outcome

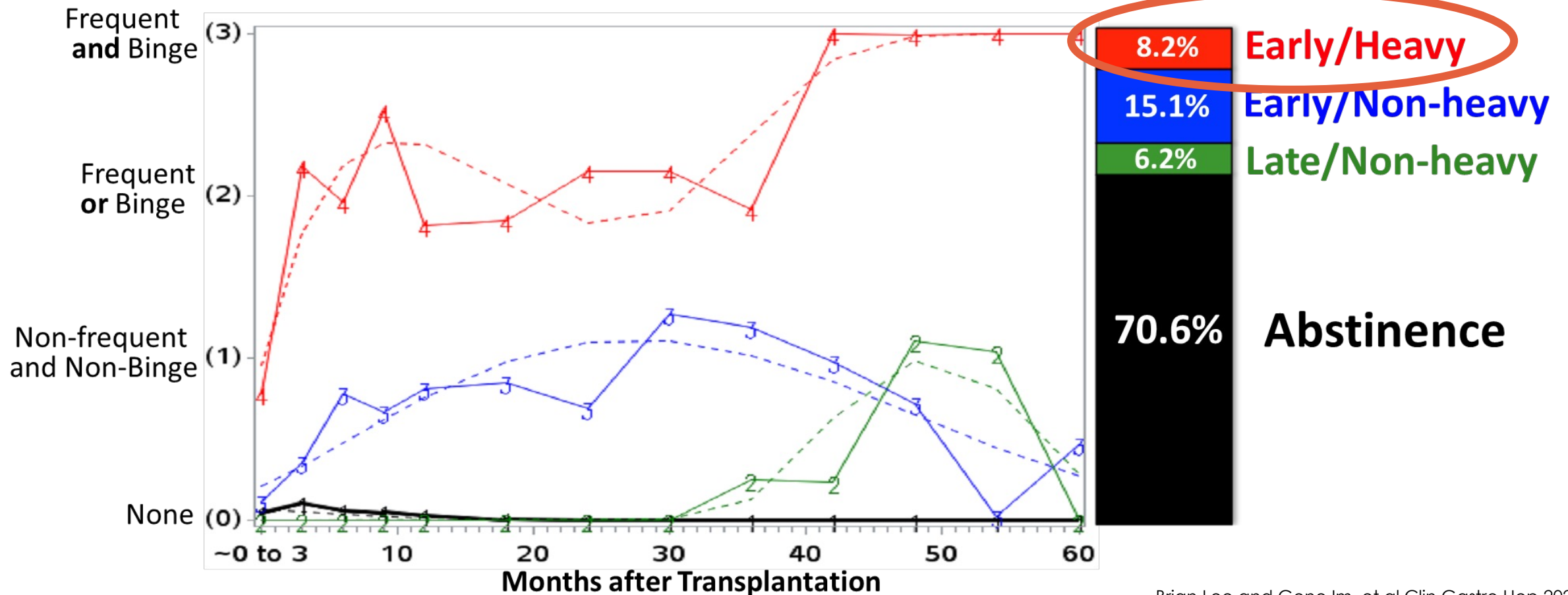
- ▶ Early LT during index hospitalization
- ▶ Explant: G3/S2 AH

Post-LT course

- Unable to enroll in alcohol rehab (declined or insurance)
- @ 2 mo: +PEth 41 (“mouthwash”) → ↑ PEth & LFTs
- Regular visits with Txp Psychiatrist
- @ 6 mo: Admission for alcohol withdrawal, n/v
- Biopsy @ 6 mo: S2 AH + mild ACR
- Intraperitoneal bleeding after biopsy → death

Patterns of Alcohol Use After Early Liver Transplantation for Alcohol-associated Hepatitis

Alcohol use



Case 3

- 42 y/o Caucasian woman transferred for severe AH with non-response to steroids.
- ↑ liver tests noted by PCP 1 yr ago, no alcohol-related hospitalizations
- PMH/PSH: Gastric bypass for morbid obesity 8 yrs ago
- Exam: VSS, BMI 40, A+Ox3, talkative, lungs CTA, obese abdomen, 2+ LE edema
- Imaging: +Hepatomegaly with slight nodular contour, no ascites
- LT eval: normal TTE & nuclear stress test

WBC 4.3

Hgb 8.4

TB/DB 40/31

AST/ALT 117/29

INR 2.3

Na 136

Cr 1.3

ABO B

MELD-Na 32

Case 3

- ▶ Accepts diagnosis of AUD + ALD; ***“I think it (abstinence) will be easy. I’m doing it for my kids. I’ll do rehab if it’s required.”***
- ▶ Last drink: 4 weeks ago
- ▶ 8 drinks/day (wine + hard seltzer); increased during COVID-19
- ▶ Prior alcohol rehab: 30d inpatient 4 yrs ago, outpatient rehab for 2 years; relapsed 2 years ago
- ▶ Other substance use: none

- ▶ Married with 2 children <10 y/o
- ▶ Stopped working during COVID-19 pandemic (property tax appraiser); h/o ↓ work performance due to drinking on the job
- ▶ FHx: Cousin (AUD)
- ▶ Psychiatric: Depression (mostly untreated)

Case 3

Questions / Comments from the Committee

Case 3 – Summary & Evidence

Positives

- ▶ Accepts diagnosis & openly discusses
- ▶ 1st decompensation
- ▶ Could be ASH+NASH
- ▶ Prior extended period of abstinence
- ▶ Motivated by her children

Negatives

- ▶ Multiple prior alcohol rehab attempts
- ▶ Drinking despite job consequences
- ▶ Abstinence “easy”
- ▶ Under-treated depression

Relapse Scores

Within Dallas: Borderline

SALT 4 (lower risk, 0-11)

SIPAT 22 (21-39, Minimally acceptable candidate)

QuickTrans 200 (200-220, borderline)

Accept Candidate for Early LT?

Case 3

When poll is active respond at

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(1)YES

(2)NO

Case 3: Accept candidate for early LT?

Yes

No

Case 3: Accept candidate for early LT?

Yes

No

Case 3: Accept candidate for early LT?

Yes

No

Case 3 - Outcome

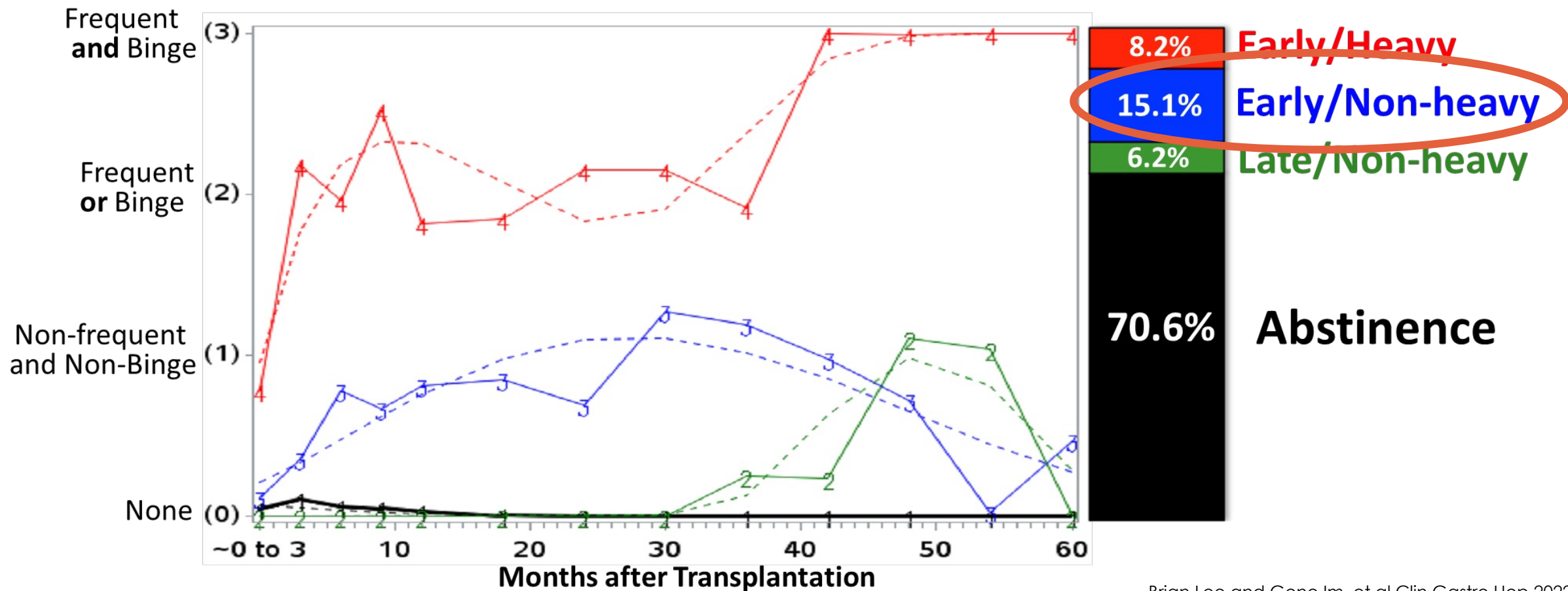
- ▶ Early LT during index hospitalization
- ▶ Explant: G3/S4 AH + cirrhosis

Post-LT course

- Self-delayed alcohol rehab but enrolled
- @ 6 mo: +PEth 29 (initially denied use) → ↑ PEth & AST/ALT
- Regular visits with PCP & Psychiatrist; started on naltrexone IM
- @ 2 yr: admission for AH (TB 5, INR 1.2, Cr 2)
- Abstinent for 2 years with normalization of liver tests

Patterns of Alcohol Use After Early Liver Transplantation for Alcohol-associated Hepatitis

Alcohol use



Case 4

- 39 y/o A.A. man from rural area transferred with jaundice, abdominal pain and hx c/w severe AH.
- Cultures negative
- Steroids deferred for AKI/HRS
- PMH/PSH: none
- EVB/L 3 months ago at OSH & newly diagnosed with cirrhosis
- Exam: VSS, BMI 31, lungs CTA, abd very distended, A+Ox3, but + asterixis
- Imaging: +Hepatomegaly, large ascites
- LT eval: normal TTE & nuclear stress test

WBC 12.2

Hgb 9.6

TB/DB 34/29

AST/ALT 71/33

INR 2.3

Na 133

Cr 4.9

MELD-Na 40

Case 4

- ▶ Accepts diagnosis of AUD + ALD; ***“Piece of cake. Just kidding. I’ve quit before so I can do it”***
- ▶ Last drink: 3 weeks ago
- ▶ Drinking since 20s, 11 drinks/day
- ▶ After cirrhosis dx, reduced drinking to 1 bottle of wine per week then stopped 1 month PTA
- ▶ Prior alcohol rehab: Court mandated rehab @ age 28 after DUI → sober for 10 years, then relapsed
- ▶ Other substance use: heroin, cocaine & cannabis use in 20’s until incarceration 7 years ago for possession of narcotics

- ▶ H/o juvenile detention as well
- ▶ Single; Mother will be primary support & will provide housing
- ▶ Unemployed but worked intermittently in catering 7 months ago
- ▶ FHx: No AUD but mother with PBC
- ▶ Psychiatric: none

Case 4

► Questions / Comments from the Committee

Case 4 – Summary & Evidence

Positives

- ▶ Accepts dx & treatment plan
- ▶ No prior alcohol rehab

Negatives

- ▶ Joking personality is hard to interpret
- ▶ Heavy drinking
- ▶ May not be 1st liver decompensation
- ▶ h/o polysubstance abuse
- ▶ Legal issues with alcohol
- ▶ Inconsistent employment

Relapse Scores

Within Dallas: Borderline

SALT 7 (≥ 5 , higher risk, 0-11)

SIPAT 37 (21-39, Minimally acceptable candidate)

QuickTrans 180 (< 200 , decline)

Accept Candidate for Early LT?

Case 4

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(1)YES

(2)NO

Case 4: Accept candidate for early LT?

Yes

No

Case 4: Accept candidate for early LT?

Yes

No

Case 4: Accept candidate for early LT?

Yes

No

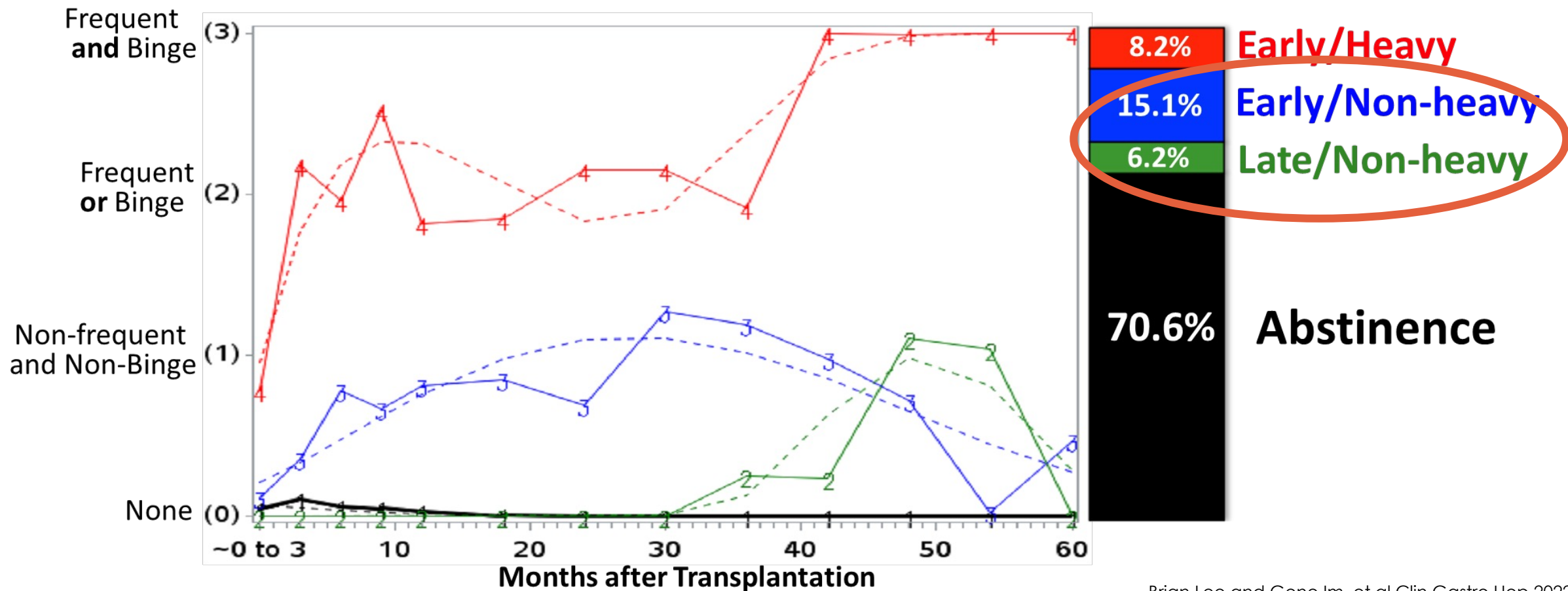
- ▶ Underwent Early LT
- ▶ Explant: G0-1/S4 AH + cirrhosis

Post-LT course

- Completed alcohol rehab with continued participation
- @ 3 mo: 1 bottle of wine & +uEtG → regained abstinence → @8yr: 1 drink q3mo
- Serial negative uEtG & Peth
- No rejection
- 10 years post-LT

Patterns of Alcohol Use After Early Liver Transplantation for Alcohol-associated Hepatitis

Alcohol use



How should we define success in early LT?

Survival (regardless of drinking)

Good allograft function/ survival (regardless of drinking)

Complete abstinence

Mostly abstinent (occasional slips OK)

Good quality of life

Benefit to society (return to work, children rearing, etc.)

Other

How should we define success in early LT?

When poll is active respond at

PollEv.com/ncscgliver

Survival (regardless of drinking)

Good allograft function/ survival (regardless of drinking)

Complete abstinence

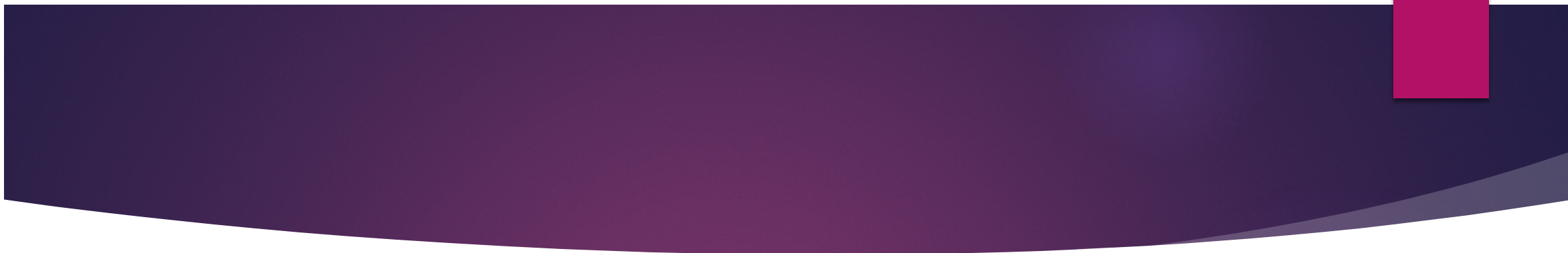
Mostly abstinent (occasional slips OK)

Good quality of life

Benefit to society (return to work, children rearing, etc.)

Other





How should we define success in early LT?

0 surveys completed



0 surveys underway

How should we define success in early LT?

Survival (regardless of drinking)

0%

Good allograft function/ survival (regardless of drinking)

0%

Complete abstinence

0%

Mostly abstinent (occasional slips OK)

0%

Good quality of life

0%

SEE MORE 

Summary

- ▶ Candidate selection in early LT for ALD can be challenging
- ▶ Wide spectrum of complexity
- ▶ Consistent, evidence-based approach is needed
- ▶ Applying democratic method to transplant selection is interesting
- ▶ Thank you for participating!