



SCIENTIFIC
REGISTRY OF
TRANSPLANT
RECIPIENTS

Associations of Marijuana Use History With Progression From Living Donor Candidate Evaluation to Approval: Analysis of the US SRTR Living Donor Collective

K.L. Lentine¹, A. Waterman², Y. Ahn³, D. Brennan⁴, P. Dean⁵, A. Duarte-Rojo⁶, V. Fleetwood¹, M. Doshi⁷, D. Segev⁸, M. Levan⁸, A. Rossi⁹, A. Matas¹⁰, D. LaPointe Rudow¹¹, W. McKinney³, F. Al Ammary¹², K. Siegert³, C. Nystedt³, J. Snyder³, A. Hart¹³

¹Saint Louis Univ., Saint Louis, MO; ²Houston Methodist, TX; ³SRTR, MN; ⁴Johns Hopkins, MD; ⁵Mayo Clinic, MN; ⁶Northwestern, IL; ⁷Univ. of Michigan, MI; ⁸NYU, NY; ⁹Piedmont, GA; ¹⁰Univ. of Minnesota, MN; ¹¹Mount Sinai, NY; ¹²UC Irvine, CA; ¹³Hennepin Healthcare, MN

Disclosures

Krista Lentine, MD, PhD

Professor

SSM Health Saint Louis University Hospital, St. Louis, MO, USA

Funding

Research support – NIDDK; Mid-America Transplant Foundation

Disclosures

Speaker honoraria – Sanofi

- **Consulting fees** – CareDx
- **SRTR** – Senior Staff | Scientific Director, Living Donor Collective
- **Volunteer Service** – Past Chair, AST Living Donor Community of Practice; Co-Chair: National Living Donor Assistance Center Advisory Group; ASN Policy & Advocacy Committee; NKF Transplant Advisory Committee

AND

My presentation **does not** include discussion of off-label or investigational use.

This work was supported wholly or in part by HRSA contract 75R60220C00011. The content is the responsibility of the authors alone and does not necessarily reflect the views or policies of the Department of HHS, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.



SCIENTIFIC REGISTRY OF
TRANSPLANT RECIPIENTS

Background



- The legalization of **cannabis** for recreational and medical use in many US states has prompted relaxation of **living donor (LD) candidate** acceptance criteria in relation to **marijuana use (MU)**.
- The impact of MU on progression from **LD candidate evaluation** ➡ **donation** remains unclear.

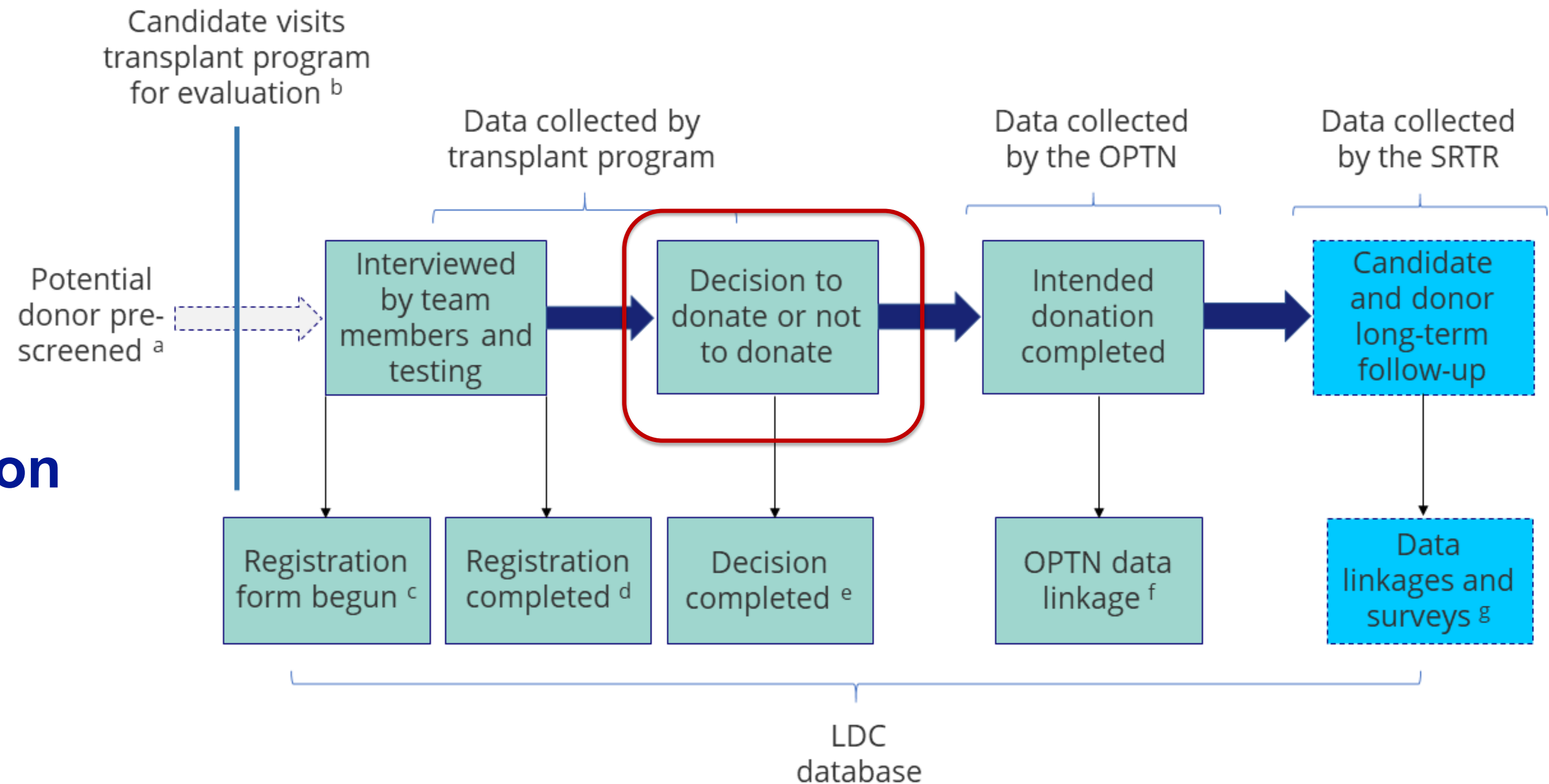
Aims & Data Source

- **Aims:** to assess patterns and reasons for LD candidate non-approval according to MU history.
- **Data Source:** The **Scientific Registry of Transplant Recipients (SRTR) Living Donor Collective (LDC)**, a novel LD candidate registry in the US



LDC Registry Design

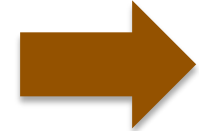
- Includes **LD candidate registration** information
- **Donation decision**



Methods: Exposure & Outcomes

- LD candidates underwent evaluation at **10 US kidney** and **6 US liver centers** (June 1, 2018–November 30, 2024).
- **MU history** – defined as past or current use.
- The outcome of **candidate evaluation** was categorized as “**approved**” or “**not approved/withdrawal.**”
- **Non-approval reasons** include: chronic kidney disease, medical risk, anatomical, psychosocial, economic, LD candidate withdrawal, recipient reason, or other (multiple reasons permitted).

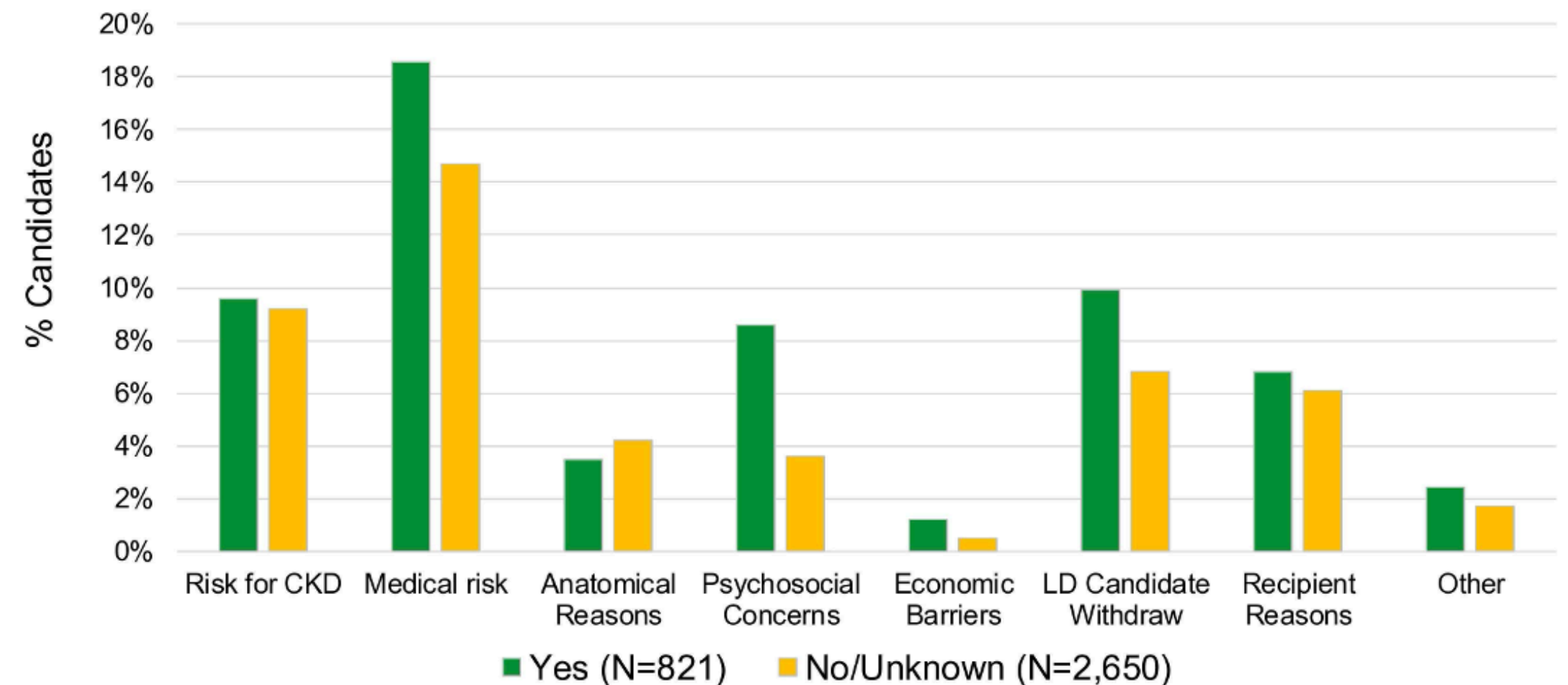
Results: MU History & Lower Odds of LD Approval

- Among 4,554 evaluated LD candidates (3,471 kidney and 1,083 liver) with a finalized donation decision, **MU history** was reported in **23.6%** of **kidney** and **29.1%** of **liver** LD candidates.
- In multivariate regression adjusted for age, sex, race, marital status, education, health insurance, and employment, **MU history** 
 - **25% lower odds of kidney LD approval** (adjusted **OR, 0.75**; $P < .0001$)
 - trend toward **20% lower odds of liver LD approval** (aOR, **0.80**; $P = .11$)

Results: Kidney LD Candidates

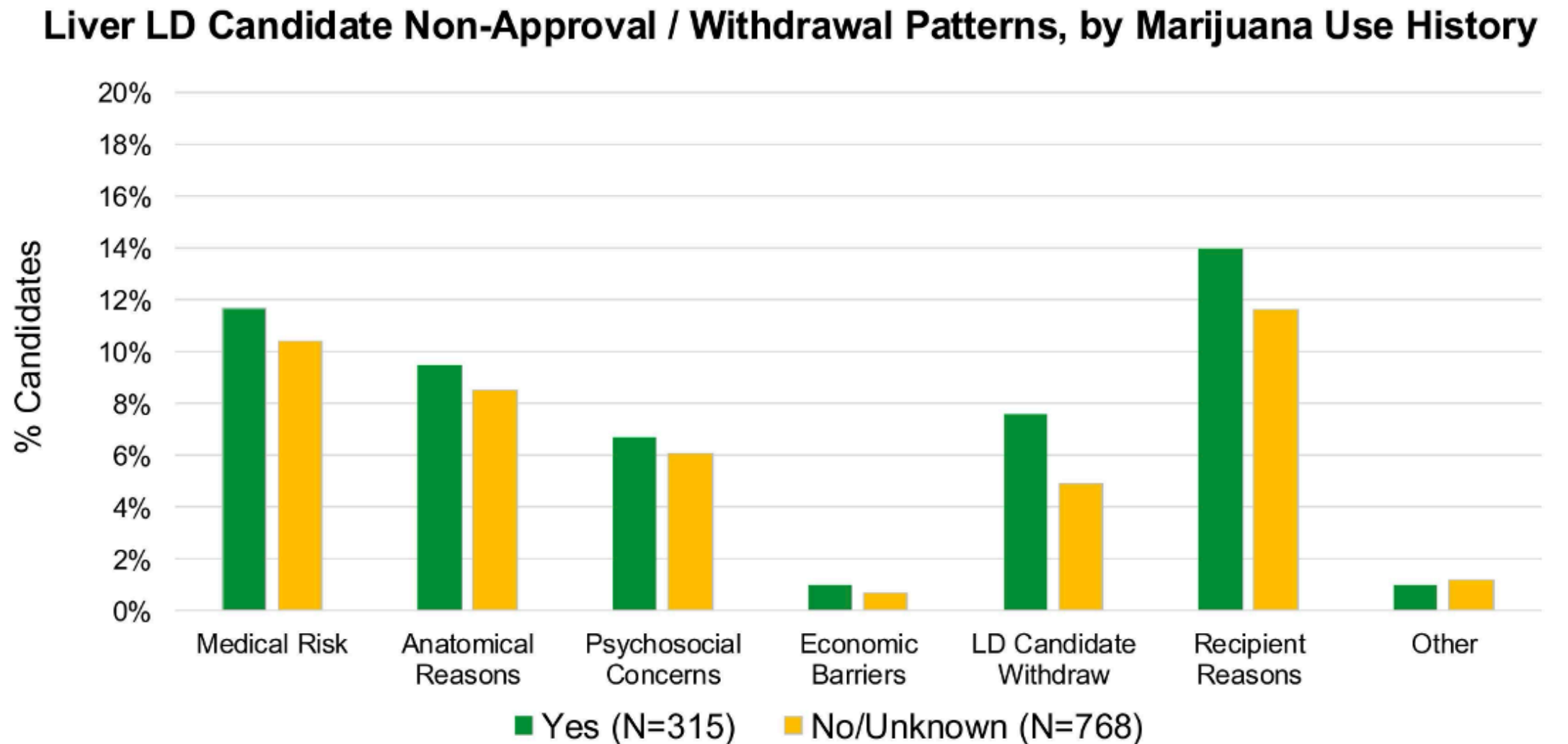
- Among kidney LD candidates, reasons for non-donation varied by MU history ($P<.001$).
- In those **with** vs **without MU history**:
 - **Medical risk** was cited in **18.6%** vs **14.7%**
 - **Psychosocial concerns** in **8.6%** vs **3.6%**
 - **LD candidate withdrawal** occurred in **9.9%** vs **6.8%**

Kidney LD Candidate Non-Approval / Withdrawal Patterns, by Marijuana Use History



Results: Liver LD Candidates

- Among liver LD candidates, the largest differences in those **with** vs **without MU history** were seen in:
 - **LD candidate withdrawal** (7.6% vs 4.9%)
 - **Recipient reasons** (14.0% vs 11.6%
($P>.05$)).



Limitations

- **Exposure misclassification** possible: MU history was identified by centers – possible underreporting or capture of highest use. Past and current not distinguished in the data.
- **Lack of quantitative MU assessment:** No data on frequency, duration, dose, method of consumption, or timing relative to evaluation.
- **Center-level variation:** Differences in center practices may affect both exposure measurement and outcomes.
- **Potential unmeasured confounders:** Despite adjustment for sociodemographic factors, factors such as mental health diagnoses, concomitant substance use, and center-specific psychosocial evaluation practices could influence associations.
- **Observational design limits causal inference:** Associations between MU history and approval or withdrawal may reflect correlated factors rather than direct effects of MU.



Conclusions

- LD candidates with **MU history** have **disproportionately higher rates of non-approval** and **withdrawal**
- **Kidney donation**: Higher rates of **medical risk**, **psychosocial concerns**, and **candidate withdrawal** among MU users
- **Liver donation**: Increased **candidate withdrawal** among MU users, with trends toward **recipient-driven** reasons
- **Implications**: Patterns highlight **potential modifiable barriers** & **needs**, such as
 - **Candidate education**
 - **Center-specific evaluation practices**
 - Need for **supportive interventions** addressing psychosocial risks





Conclusions

- **Caution in interpretation:** Findings should be interpreted carefully given limitations in MU measurement and possible residual confounding.
- **Further research** should explore **medical** and **psychosocial profiles** associated with MU to **better tailor supports** to address modifiable barriers to donation.





Transplantation

Director	Jon Snyder, PhD, MS	Marketing & Comm.	Mona Shater, MA Amy Ketterer Tonya Eberhart	Sr. Manager, Biostatistics	David Zaun, MS
Deputy Director	Allyson Hart			Biostatisticians	Jon Miller, PhD, MPH Grace Lyden, PhD Maria Masotti, PhD David Schladt, MS Yoon Son Ahn, MS Nick Wood, PhD
Surgical Director	Ryutaro Hirose, MD	Project Managers	Bryn Thompson, MPH Katie Siegert, MPH Avery Cook, MPH, MSW		
Medical Director	Roslyn Mannon, MD	Medical Editor	Anna Gillette	IT, Web, Database, Simulation	Ryan Follmer Patrick Johnson Dan Larson Joshua Pyke, PhD Eugene Shteyn, MS Tim Weaver, MS
Program Manager	Caitlyn Nystedt, MPH, PMP	Research Office Manager	Sydney Kletter Sharma		

