

# Steroid Avoidance After Adult Living Donor Liver Transplant – A cohort analysis

**Miguel Nunez**, Claudia Praglin, Ana Marie Torres, Eliana Agudelo, Hillary Braun, Chiung-Yu Huang, Shareef Syed, John Roberts, Garrett Roll

## BACKGROUND

- Steroids increase morbidity, and steroid avoidance (SA) has been studied in deceased donor liver transplant but, little is known about SA in living donor liver transplant (LDLT).
- We report the characteristics, and outcomes, including incidence of acute rejection (AR) and complications of steroid use in cohorts of LDLT patients

## METHODS

- Single-center retrospective cohort study. Routine steroid maintenance (SM) was stopped at our center in 12/2017
- 242 patients who underwent LDLT with SM (1/2000-12/2017) and 83 patients (12/2017-8/2021) with SA who received a single dose of steroids during LDLT.
- AR was defined as a biopsy showing pathologic characteristics within 6 months

## RESULTS

- AR was not significantly different between groups, 22.9% on SA and 17% on SM.
- Patients with autoimmune disease did not show a significant difference in AR (29.4% SA vs 22.4% SM).
- Most demographics had no impact on rejection using univariate and multivariate logistic regression.
- Of the patients that were not diabetic prior to LDLT, 5.4% with SA vs 13% on SM developed new-onset diabetes after transplant (NODAT).

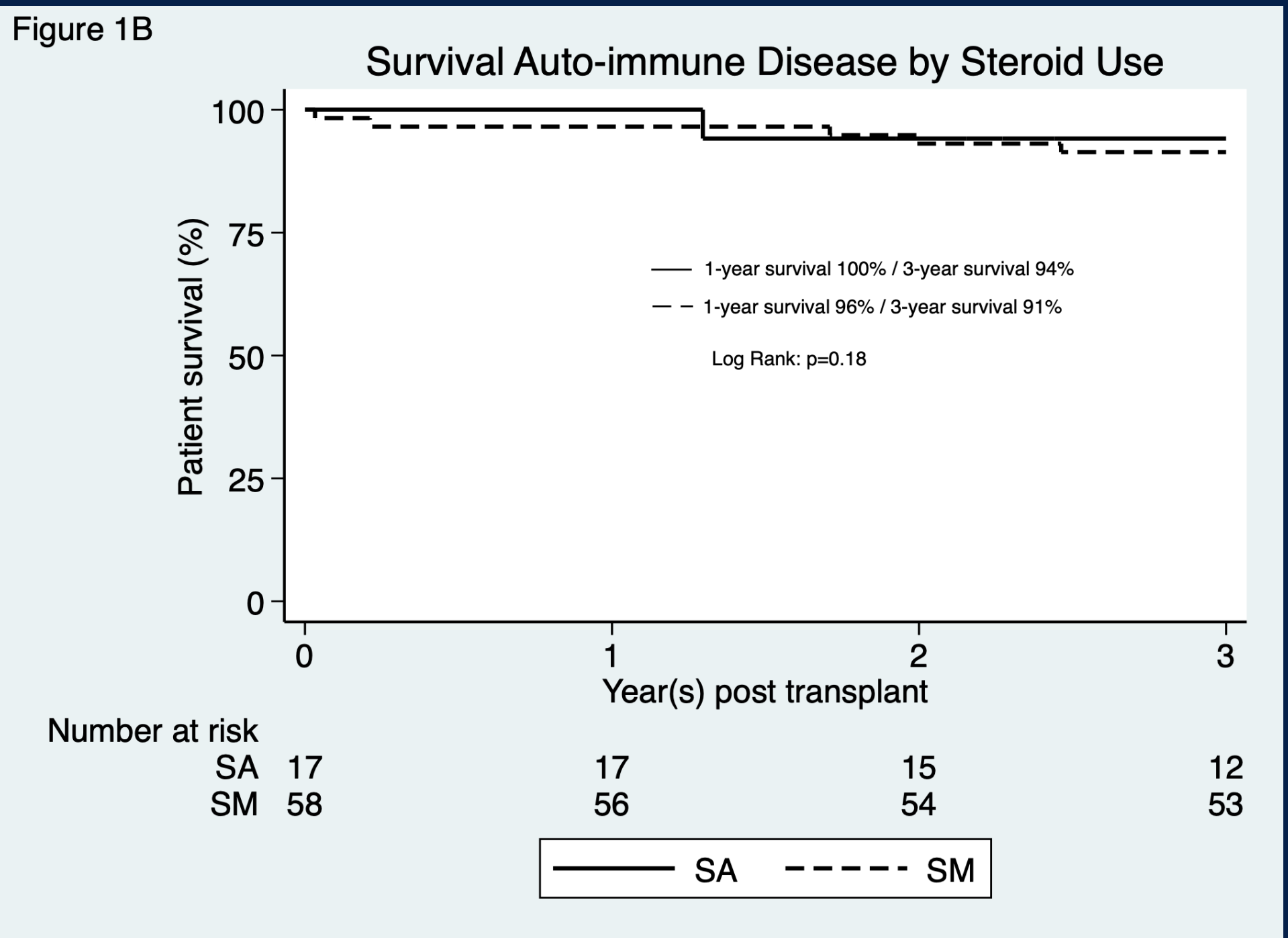
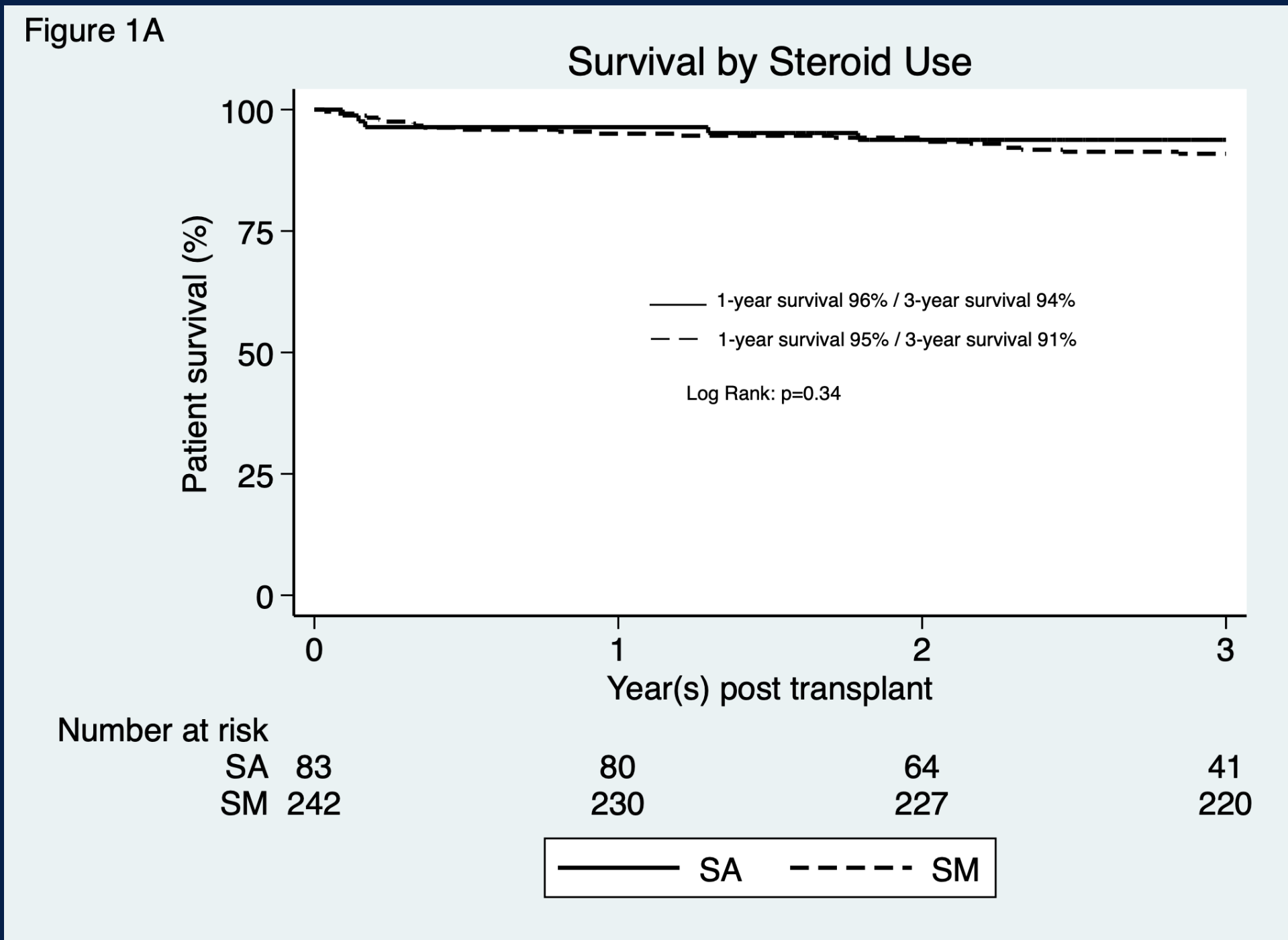
## ACKNOWLEDGEMENTS

MN is supported by NIH Diversity Supplement 3R01AA026578-04S1

## CONCLUSIONS:

- Our results demonstrate that LDLT patients on SA protocols do not exhibit higher rates of mortality or biopsy proven AR than patients who received SM.
- Although not significant, SA had a trend towards decreased NODAT.
- This practice seems to be safe in patients with AI disease.

| Table 1: Patient Demographics |  | SA (83 pts) |      | SM (242 pts) |      | p-value |
|-------------------------------|--|-------------|------|--------------|------|---------|
|                               |  | n           | %    | n            | %    |         |
| Age, median (SD)              |  | 56 (11.8)   |      | 54 (10.9)    |      | 0.15    |
| Sex                           |  |             |      |              |      |         |
| Male                          |  | 41          | 49.4 | 120          | 49.6 | 0.98    |
| Ethnicity                     |  |             |      |              |      |         |
| White, non-Hispanic           |  | 51          | 61.4 | 147          | 60.7 | 0.98    |
| Hispanic, Latino              |  | 21          | 25.3 | 65           | 26.9 |         |
| Other                         |  | 11          | 13.3 | 30           | 12.4 |         |
| Etiology                      |  |             |      |              |      |         |
| NASH                          |  | 27          | 32.5 | 14           | 5.8  | <0.001  |
| Alcoholic cirrhosis           |  | 14          | 16.9 | 51           | 21.1 |         |
| Hepatitis C                   |  | 13          | 15.7 | 60           | 24.8 |         |
| PSC/PBC/AIH                   |  | 17          | 20.4 | 58           | 23.9 |         |
| Other                         |  | 12          | 14.5 | 59           | 24.4 |         |
| BMI                           |  | 27.2 (5)    |      | 27 (4.9)     |      | 0.8     |
| Liver lobe received           |  |             |      |              |      |         |
| Right                         |  | 76          | 91.6 | 154          | 63.6 | <0.001  |
| History of diabetes           |  | 27          | 32.5 | 41           | 16.9 | 0.003   |
| Related to donor              |  | 43          | 51.8 | 171          | 70.7 | 0.002   |
| Donor age, median + SD        |  | 37.6 (12)   |      | 35.8 (10.3)  |      | 0.17    |
| Donor sex                     |  |             |      |              |      |         |
| Male                          |  | 36          | 43.4 | 121          | 50   | 0.3     |
| Time to rejection + SD        |  | 49.5 (48.6) |      | 44 (49.1)    |      | 0.69    |
| Length of stay (d) + SD       |  | 12.3 (9.1)  |      | 14 (12.9)    |      | 0.28    |
| Readmissions <180d + SD       |  | 1.2 (1.4)   |      | 1.5 (1.6)    |      | 0.19    |
| Survival at 6 months          |  | 81          | 97.6 | 234          | 96.7 | 0.68    |



University of California  
San Francisco

