

Dataset Integrity Check for Losartan for the Treatment of Pediatric NAFLD (STOP-NAFLD)

Prepared by NIDDK-CR
July 11, 2023

Contents

1 Standard Disclaimer	2
2 Study Background	2
3 Archived Datasets	2
4 Statistical Methods	2
5 Results	3
6 Conclusions	3
7 References	3
Table A: Variables used to replicate Table 1 – Baseline characteristics in the losartan and placebo treatment groups	4
Table B: Comparison of values computed in integrity check to reference article Table 1	8
Attachment A: SAS Code	13

1 Standard Disclaimer

The intent of this DSIC is to provide confidence that the data distributed by the NIDDK repository is a true copy of the study data. Our intent is not to assess the integrity of the statistical analyses reported by study investigators. As with all statistical analyses of complex datasets, complete replication of a set of statistical results should not be expected in secondary analysis. This occurs for a number of reasons including differences in the handling of missing data, restrictions on cases included in samples for a particular analysis, software coding used to define complex variables, etc. Experience suggests that most discrepancies can ordinarily be resolved by consultation with the study data coordinating center (DCC), however this process is labor-intensive for both DCC and Repository staff. It is thus not our policy to resolve every discrepancy that is observed in an integrity check. Specifically, we do not attempt to resolve minor or inconsequential discrepancies with published results or discrepancies that involve complex analyses, unless NIDDK Repository staff suspect that the observed discrepancy suggests that the dataset may have been corrupted in storage, transmission, or processing by repository staff. We do, however, document in footnotes to the integrity check those instances in which our secondary analyses produced results that were not fully consistent with those reported in the target publication.

2 Study Background

The STOP-NAFLD trial was a multicenter, double-masked, placebo-controlled, randomized phase 2 trial to determine whether treatment with losartan improves measures of nonalcoholic fatty liver disease (NAFLD) in children. Children between the ages of 8 and 17 years with biopsy-proven NAFLD were eligible for the study. Participants were enrolled and randomized to treatment with either 100 mg of losartan or matching placebo orally once daily for 24 weeks. Improvement in NAFLD at 24 weeks, defined as a decrease in serum alanine aminotransferase (ALT), was assessed as the primary outcome measure. Secondary outcome measures, also assessed at 24 weeks, included relative change in ALT; changes in serum aspartate aminotransferase (AST) and gamma-glutamyl transpeptidase (GGT); change in Homeostatic Model Assessment of Insulin Resistance (HOMA-IR); changes in anthropometric measurements, BMI z-score, and serum lipid profiles; and self-reported quality of life.

3 Archived Datasets

A full listing of archived datasets included in the package can be found in the Roadmap document. All data files, as provided by the Data Coordinating Center (DCC), are located in the STOP-NAFLD folder in the data package. For this replication, variables were taken from the “table1.sas7bdat” dataset.

4 Statistical Methods

Analyses were performed to replicate results for the data in the publication by Vos et al. [1]. To verify the integrity of the data, only descriptive statistics were computed.

5 Results

For Table 1 in the publication [1], Baseline characteristics in the losartan and placebo treatment groups, Table A lists the variables that were used in the replication, and Table B compares the results calculated from the archived data files to the results in Table 1. The results of the replication are within expected variation of the published results.

6 Conclusions

The NIDDK Central Repository is confident that the STOP-NAFLD data files to be distributed are a true copy of the study data.

7 References

[1] Vos MB, Van Natta ML, Blondet NM, Dasarathy S, Fishbein M, Hertel P, Jain AK, Karpen SJ, Lavine JE, Mohammad S, Miriel LA, Molleston JP, Mouzaki M, Sanyal A, Sharkey EP, Schwimmer JB, Tonascia J, Wilson LA, Xanthakos SA. Randomized placebo-controlled trial of losartan for pediatric NAFLD. *Hepatology*, 76(2), 429-444, February 2022. doi: <https://doi.org/10.1002/hep.32403>

Table A: Variables used to replicate Table 1 – Baseline characteristics in the losartan and placebo treatment groups

Table Variable	dataset.variable
Age	table1.trt table1.age
Male sex	table1.trt table1.male
Onset of menarche	table1.trt table1.menarche
White race	table1.trt table1.white
Hispanic ethnicity	table1.trt table1.hispanic
ALT	table1.trt table1.alt
AST	table1.trt table1.ast
ALP	table1.trt table1.alka
GGT	table1.trt table1.ggt
Total bilirubin	table1.trt table1.bilit
Direct bilirubin	table1.trt table1.bilid
Total cholesterol	table1.trt table1.chol
HDL	table1.trt table1.hdl
LDL	table1.trt table1.ldl
Triglycerides	table1.trt table1.trig
Fasting serum glucose	table1.trt table1.glucose
Insulin	table1.trt table1.insu
HOMA-IR	table1.trt table1.homair
HbA1C	table1.trt table1.hba1c
Height	table1.trt table1.htcm
Weight	table1.trt table1.wtkg

Table Variable	dataset.variable
Body mass index	table1.trt table1.bmi
Midarm circumference	table1.trt table1.midarmcm
Waist circumference	table1.trt table1.waistcm
Hip circumference	table1.trt table1.hipcm
Waist to hip ratio	table1.trt table1.waisthip
Systolic blood pressure	table1.trt table1.sbp
Diastolic blood pressure	table1.trt table1.dbp
Pulse	table1.trt table1.pulse
Breath rate	table1.trt table1.breathrate
Hemoglobin	table1.trt table1.hgb
Hematocrit	table1.trt table1.hema
MCV	table1.trt table1.mcv
WBC	table1.trt table1.wbc
RBC	table1.trt table1.rbc
Neutrophils	table1.trt table1.neutrophils
Lymphocytes	table1.trt table1.lymphocytes
Monocytes	table1.trt table1.monocytes
Eosinophils	table1.trt table1.eosiniphils
Basophils	table1.trt table1.basophils
Platelet	table1.trt table1.platelet
Sodium	table1.trt table1.na
Potassium	table1.trt table1.k
Chloride	table1.trt table1.chloride

Table Variable	dataset.variable
Bicarbonate	table1.trt table1.bicarbonate
Calcium	table1.trt table1.calcium
Blood urea nitrogen	table1.trt table1.bun
Creatinine	table1.trt table1.cr
eGFR	table1.trt table1.egfr
Prothrombin time	table1.trt table1.pt
International normalized ratio	table1.trt table1.inr
Uric acid	table1.trt table1.uric
C-reactive protein	table1.trt table1.crp
Cardiovascular disease	table1.trt table1.cvd
Diabetes	table1.trt table1.diabetes
Anti-lipidemic medication	table1.trt table1.lipidrx
Anti-diabetic medication	table1.trt table1.diabrx
Anti-obesity medication	table1.trt table1.obesityrx
Anti-psychotic medication	table1.trt table1.psychoticrx
Time from biopsy	table1.trt table1.bxtime
Steatohepatitis	table1.trt table1.nashdx
Fibrosis stage	table1.trt table1.fibro table1.nas
Hepatocellular ballooning score	table1.trt table1.balloon
Steatosis score	table1.trt table1.steatosis
Lobular inflammation score	table1.trt table1.lobinflam
Portal inflammation score	table1.trt table1.portal

Table Variable	dataset.variable
Physical health score (self-report)	table1.trt table1.physical
Psychosocial health score (self-report)	table1.trt table1.psychosocial
Physical health score (parent-proxy report)	table1.trt table1.pphysical
Psychosocial health score (parent-proxy report)	table1.trt table1.ppsychosocial

Table B: Comparison of values computed in integrity check to reference article Table 1

Mean (SD)/median [IQR]/n (%)	Pub: Losartan (n=43)	DSIC: Losartan (n=43)	Diff. (n=0)	Pub: Placebo (n=40)	DSIC: Placebo (n=40)	Diff. (n=0)	Pub: Total (n=83)	DSIC: Total (n=83)	Diff. (n=0)
Demographics									
Age [range], years	14 [9-17]	14 [9-17]	0 (0)	13 [9-17]	13 [9-17]	0 (0)	13 [9-17]	14 [9-17]	1 (0)
Male sex, n (%)	33 (77%)	33 (77%)	0 (0)	34 (85%)	34 (85%)	0 (0)	67 (81%)	67 (81%)	0 (0)
Onset of menarche, n/girls (%)	6/10 (60%)	6/10 (60%)	0 (0)	5/6 (83%)	5/6 (83%)	0 (0)	11/16 (69%)	11/16 (69%)	0 (0)
White race, n/nonrefusal (%)	28/34 (82%)	28/34 (82%)	0 (0)	25/32 (78%)	25/32 (78%)	0 (0)	53/66 (80%)	53/66 (80%)	0 (0)
Hispanic ethnicity, n (%)	33 (77%)	33 (77%)	0 (0)	33 (82%)	33 (82%)	0 (0)	66 (80%)	66 (80%)	0 (0)
Liver enzymes									
ALT, U/l	115 (50)	115 (50)	0 (0)	126 (61)	126 (61)	0 (0)	120 (55)	120 (55)	0 (0)
AST, U/l	59 (26)	59 (26)	0 (0)	70 (38)	70 (38)	0 (0)	64 (33)	64 (33)	0 (0)
ALP, U/l	192 (114)	192 (114)	0 (0)	202 (99)	202 (99)	0 (0)	197 (106)	197 (106)	0 (0)
GGT, U/l	53 (44)	53 (44)	0 (0)	51 (28)	51 (28)	0 (0)	52 (37)	52 (37)	0 (0)
Total bilirubin, mg/dl	0.6 (0.3)	0.6 (0.3)	0 (0)	0.6 (0.3)	0.6 (0.3)	0 (0)	0.6 (0.3)	0.6 (0.3)	0 (0)
Direct bilirubin, mg/dl	0.1 (0.1)	0.1 (0.1)	0 (0)	0.1 (0.1)	0.1 (0.1)	0 (0)	0.1 (0.1)	0.1 (0.1)	0 (0)
Lipids/Cholesterol									
Total, mg/dl	159 (44)	159 (44)	0 (0)	155 (31)	155 (31)	0 (0)	157 (38)	157 (38)	0 (0)
HDL, mg/dl	39 (7)	39 (7)	0 (0)	41 (9)	41 (9)	0 (0)	40 (8)	40 (8)	0 (0)
LDL, mg/dl	91 (40)	91 (40)	0 (0)	92 (22)	92 (22)	0 (0)	91 (32)	91 (32)	0 (0)
Triglycerides, mg/dl	158 (105)	158 (105)	0 (0)	128 (58)	128 (58)	0 (0)	143 (87)	143 (87)	0 (0)
Metabolic factors									
Fasting serum glucose, mg/dl	91 [84, 100]	91 [84, 100]	0 (0)	87 [81, 96]	87 [81, 96]	0 (0)	89 [82, 97]	89 [82, 97]	0 (0)
Insulin, umol/ml	29 [18, 42]	29 [18, 42]	0 (0)	38 [21, 44]	38 [21, 44]	0 (0)	32 [21, 44]	32 [21, 44]	0 (0)
HOMA-IR, mg/dl × umol/ml/405	6.5 [3.9, 10.7]	6.5 [3.9, 10.7]	0 (0)	8.3 [4.0, 10.2]	8.3 [4.0, 10.2]	0 (0)	7.1 [4.0, 10.2]	7.1 [4.0, 10.2]	0 (0)
HbA1C, %	5.4 (0.6)	5.4 (0.6)	0 (0)	5.4 (0.3)	5.4 (0.3)	0 (0)	5.4 (0.5)	5.4 (0.5)	0 (0)
Height, cm	165 (9)	165 (9)	0 (0)	165 (9)	165 (9)	0 (0)	165 (9)	165 (9)	0 (0)
Weight, kg	95 (17)	95 (17)	0 (0)	96 (19)	96 (19)	0 (0)	95 (18)	95 (18)	0 (0)

Mean (SD)/median [IQR]/n (%)	Pub: Losartan (n=43)	DSIC: Losartan (n=43)	Diff. (n=0)	Pub: Placebo (n=40)	DSIC: Placebo (n=40)	Diff. (n=0)	Pub: Total (n=83)	DSIC: Total (n=83)	Diff. (n=0)
Body mass index, kg/m ²	34 (5)	34 (5)	0 (0)	35 (5)	35 (5)	0 (0)	35 (5)	35 (5)	0 (0)
Midarm circumference, cm	33 (4)	33 (4)	0 (0)	33 (4)	33 (4)	0 (0)	33 (4)	33 (4)	0 (0)
Waist circumference, cm	108 (11)	108 (11)	0 (0)	111 (11)	111 (11)	0 (0)	110 (11)	110 (11)	0 (0)
Hip circumference, cm	110 (11)	110 (11)	0 (0)	112 (11)	112 (11)	0 (0)	111 (11)	111 (11)	0 (0)
Waist to hip ratio	0.99 (0.06)	0.99 (0.06)	0 (0)	0.99 (0.06)	0.99 (0.06)	0 (0)	0.99 (0.06)	0.99 (0.06)	0 (0)
Systolic blood pressure, mmHg	121 (9)	121 (9)	0 (0)	119 (9)	119 (9)	0 (0)	120 (9)	120 (9)	0 (0)
Diastolic blood pressure, mmHg	69 (6)	69 (6)	0 (0)	69 (6)	69 (6)	0 (0)	69 (6)	69 (6)	0 (0)
Pulse, min	79 (13)	79 (13)	0 (0)	80 (13)	80 (13)	0 (0)	79 (13)	79 (13)	0 (0)
Breath rate, min	18 (3)	18 (3)	0 (0)	19 (4)	19 (4)	0 (0)	19 (3)	19 (3)	0 (0)
Laboratory results									
Hemoglobin, g/dl	14.5 (1.1)	14.5 (1.1)	0 (0)	14.0 (1.2)	14.0 (1.2)	0 (0)	14.2 (1.2)	14.2 (1.2)	0 (0)
Hematocrit, %	43.2 (3.3)	43.2 (3.3)	0 (0)	42.0 (3.4)	42.0 (3.4)	0 (0)	42.6 (3.4)	42.6 (3.4)	0 (0)
MCV, fL	84.9 (4.4)	84.9 (4.4)	0 (0)	84.7 (3.4)	84.7 (3.4)	0 (0)	84.8 (4.0)	84.8 (4.0)	0 (0)
WBC, 10 ³ cells/ μ l	7.2 (1.5)	7.2 (1.5)	0 (0)	8.6 (2.4)	8.6 (2.4)	0 (0)	7.9 (2.1)	7.9 (2.1)	0 (0)
RBC, mill cells/ μ l	509 (39)	509 (39)	0 (0)	496 (37)	496 (37)	0 (0)	503 (39)	503 (39)	0 (0)
Neutrophils, cells/ μ l	3541 (1123)	3541 (1123)	0 (0)	4231 (1867)	4231 (1867)	0 (0)	3869 (1552)	3869 (1552)	0 (0)
Lymphocytes, cells/ μ l	2656 (727)	2656 (727)	0 (0)	3031 (1003)	3031 (1003)	0 (0)	2835 (884)	2835 (884)	0 (0)
Monocytes, cells/ μ l	501 (165)	501 (165)	0 (0)	578 (217)	578 (217)	0 (0)	537 (194)	537 (194)	0 (0)
Eosinophils, cells/ μ l	297 (245)	297 (245)	0 (0)	278 (249)	278 (249)	0 (0)	288 (245)	288 (245)	0 (0)
Basophils, cells/ μ l	35 (37)	35 (37)	0 (0)	65 (126)	65 (126)	0 (0)	49 (91)	49 (91)	0 (0)
Platelet, 1000 cells/mm ³	277 (57)	277 (57)	0 (0)	311 (66)	311 (66)	0 (0)	293 (64)	293 (64)	0 (0)
Sodium, mEq/l	140.0 (2.0)	140.0 (2.0)	0 (0)	139.7 (2.0)	139.7 (2.0)	0 (0)	139.9 (2.0)	139.9 (2.0)	0 (0)
Potassium, mEq/l	4.1 (0.3)	4.1 (0.3)	0 (0)	4.2 (0.2)	4.2 (0.2)	0 (0)	4.2 (0.3)	4.2 (0.3)	0 (0)
Chloride, mEq/l	103.9 (2.7)	103.9 (2.7)	0 (0)	102.9 (2.5)	102.9 (2.5)	0 (0)	103.4 (2.6)	103.4 (2.6)	0 (0)
Bicarbonate, mEq/l	24.3 (2.5)	24.2 (2.5)	0.1 (0)	24.7 (2.0)	24.7 (2.0)	0 (0)	24.4 (2.3)	24.4 (2.3)	0 (0)
Calcium, mEq/l	9.8 (0.4)	9.8 (0.4)	0 (0)	9.8 (0.3)	9.8 (0.3)	0 (0)	9.8 (0.3)	9.8 (0.3)	0 (0)

Mean (SD)/median [IQR]/n (%)	Pub: Losartan (n=43)	DSIC: Losartan (n=43)	Diff. (n=0)	Pub: Placebo (n=40)	DSIC: Placebo (n=40)	Diff. (n=0)	Pub: Total (n=83)	DSIC: Total (n=83)	Diff. (n=0)
Blood urea nitrogen, mg/dl	10.9 (3.1)	10.9 (3.1)	0 (0)	10.5 (2.5)	10.5 (2.5)	0 (0)	10.7 (2.8)	10.7 (2.8)	0 (0)
Creatinine, mg/dl	0.56 (0.14)	0.56 (0.14)	0 (0)	0.56 (0.13)	0.56 (0.13)	0 (0)	0.56 (0.14)	0.56 (0.14)	0 (0)
eGFR, ml/min/1.73 m ²	156 (19)	156 (19)	0 (0)	155 (17)	155 (17)	0 (0)	156 (18)	156 (18)	0 (0)
Prothrombin time, seconds	12.3 (1.3)	12.3 (1.3)	0 (0)	11.9 (1.3)	11.9 (1.3)	0 (0)	12.1 (1.3)	12.1 (1.3)	0 (0)
International normalized ratio	1.04 (0.07)	1.04 (0.07)	0 (0)	1.04 (0.08)	1.04 (0.08)	0 (0)	1.04 (0.07)	1.04 (0.07)	0 (0)
Uric acid, mg/dl	6.6 (1.7)	6.6 (1.7)	0 (0)	6.6 (1.5)	6.6 (1.5)	0 (0)	6.6 (1.6)	6.6 (1.6)	0 (0)
C-reactive protein, mg/l	3.8 (2.5)	3.8 (2.5)	0 (0)	3.8 (3.0)	3.8 (3.0)	0 (0)	3.8 (2.7)	3.8 (2.7)	0 (0)
Comorbidities									
Cardiovascular disease, n (%)	0 (0%)	0 (0%)	0 (0)	0 (0%)	0 (0%)	0 (0)	0 (0%)	0 (0%)	0 (0)
Diabetes, n (%)	2 (4%)	2 (4%)	0 (0)	1 (2%)	1 (2%)	0 (0)	3 (4%)	3 (4%)	0 (0)
Concomitant medications in the past 6 months									
Anti-lipidemic, n (%)	3 (7%)	3 (7%)	0 (0)	0 (0%)	0 (0%)	0 (0)	3 (4%)	3 (4%)	0 (0)
Anti-diabetic, n (%)	0 (0%)	0 (0%)	0 (0)	0 (0%)	0 (0%)	0 (0)	0 (0%)	0 (0%)	0 (0)
Anti-obesity, n (%)	0 (0%)	0 (0%)	0 (0)	0 (0%)	0 (0%)	0 (0)	0 (0%)	0 (0%)	0 (0)
Anti-psychotic, n (%)	2 (5%)	2 (5%)	0 (0)	2 (5%)	2 (5%)	0 (0)	4 (5%)	4 (5%)	0 (0)
Liver histology findings									
Time from biopsy, years	0.7 (0.6)	0.7 (0.6)	0 (0)	0.8 (0.6)	0.8 (0.6)	0 (0)	0.8 (0.6)	0.8 (0.6)	0 (0)
Steatohepatitis									
NAFLD, not NASH, n (%)	15 (35%)	15 (35%)	0 (0)	9 (22%)	9 (22%)	0 (0)	24 (29%)	24 (29%)	0 (0)
Borderline Zone 3, n (%)	9 (21%)	9 (21%)	0 (0)	7 (18%)	7 (18%)	0 (0)	16 (19%)	16 (19%)	0 (0)
Borderline Zone 1, n (%)	11 (26%)	11 (26%)	0 (0)	12 (30%)	12 (30%)	0 (0)	23 (28%)	23 (28%)	0 (0)
Definite, n (%)	8 (19%)	8 (19%)	0 (0)	12 (30%)	12 (30%)	0 (0)	20 (24%)	20 (24%)	0 (0)
Fibrosis stage									
Stage 0 (none), n (%)	17 (40%)	17 (40%)	0 (0)	7 (18%)	7 (18%)	0 (0)	24 (29%)	24 (29%)	0 (0)
Stage 1 (mild), n (%)	13 (30%)	13 (30%)	0 (0)	20 (50%)	20 (50%)	0 (0)	33 (40%)	33 (40%)	0 (0)
Stage 2 (moderate), n (%)	8 (19%)	8 (19%)	0 (0)	5 (12%)	5 (12%)	0 (0)	13 (16%)	13 (16%)	0 (0)

Mean (SD)/median [IQR]/n (%)	Pub: Losartan (n=43)	DSIC: Losartan (n=43)	Diff. (n=0)	Pub: Placebo (n=40)	DSIC: Placebo (n=40)	Diff. (n=0)	Pub: Total (n=83)	DSIC: Total (n=83)	Diff. (n=0)
Stage 3 (bridging), n (%)	5 (12%)	5 (12%)	0 (0)	8 (20%)	8 (20%)	0 (0)	13 (16%)	13 (16%)	0 (0)
Mean (SD) stage	1.0 (1.0)	1.0 (1.0)	0 (0)	1.4 (1.0)	1.4 (1.0)	0 (0)	1.2 (1.0)	1.2 (1.0)	0 (0)
Total NAS	4.6 (1.5)	4.6 (1.5)	0 (0)	4.4 (1.2)	4.4 (1.2)	0 (0)	4.5 (1.4)	4.5 (1.4)	0 (0)
Hepatocellular ballooning score									
0 (none), n (%)	31 (72%)	31 (72%)	0 (0)	27 (68%)	27 (68%)	0 (0)	58 (70%)	58 (70%)	0 (0)
1 (few), n (%)	6 (14%)	6 (14%)	0 (0)	10 (25%)	10 (25%)	0 (0)	16 (19%)	16 (19%)	0 (0)
2 (many), n (%)	6 (14%)	6 (14%)	0 (0)	3 (8%)	3 (8%)	0 (0)	9 (11%)	9 (11%)	0 (0)
Mean (SD)	0.4 (0.7)	0.4 (0.7)	0 (0)	0.4 (0.6)	0.4 (0.6)	0 (0)	0.4 (0.7)	0.4 (0.7)	0 (0)
Steatosis score									
1 (< 34%), n (%)	4 (9%)	4 (9%)	0 (0)	6 (15%)	6 (15%)	0 (0)	10 (12%)	10 (12%)	0 (0)
2 (34%-66%), n (%)	13 (30%)	13 (30%)	0 (0)	11 (28%)	11 (28%)	0 (0)	24 (29%)	24 (29%)	0 (0)
3 (≥ 67%), n (%)	26 (60%)	26 (60%)	0 (0)	23 (58%)	23 (58%)	0 (0)	49 (59%)	49 (59%)	0 (0)
Mean (SD)	2.5 (0.7)	2.5 (0.7)	0 (0)	2.4 (0.7)	2.4 (0.7)	0 (0)	2.5 (0.7)	2.5 (0.7)	0 (0)
Lobular inflammation score									
1 (< 2 foci under ×20 mag), n (%)	21 (49%)	21 (49%)	0 (0)	17 (42%)	17 (42%)	0 (0)	38 (46%)	38 (46%)	0 (0)
2 (2-4 foci under ×20 mag), n (%)	16 (37%)	16 (37%)	0 (0)	21 (52%)	21 (52%)	0 (0)	37 (45%)	37 (45%)	0 (0)
3 (> 4 foci under ×20 mag), n (%)	6 (14%)	6 (14%)	0 (0)	2 (5%)	2 (5%)	0 (0)	8 (10%)	8 (10%)	0 (0)
Mean (SD)	1.7 (0.7)	1.7 (0.7)	0 (0)	1.6 (0.6)	1.6 (0.6)	0 (0)	1.6 (0.7)	1.6 (0.7)	0 (0)
Portal inflammation score									
1 (none), n (%)	7 (16%)	7 (16%)	0 (0)	5 (12%)	5 (12%)	0 (0)	12 (14%)	12 (14%)	0 (0)
2 (mild), n (%)	30 (70%)	30 (70%)	0 (0)	28 (70%)	28 (70%)	0 (0)	58 (70%)	58 (70%)	0 (0)
3 (> mild), n (%)	6 (14%)	6 (14%)	0 (0)	7 (18%)	7 (18%)	0 (0)	13 (16%)	13 (16%)	0 (0)
Mean (SD)	1.0 (0.6)	1.0 (0.6)	0 (0)	1.0 (0.6)	1.0 (0.6)	0 (0)	1.0 (0.6)	1.0 (0.6)	0 (0)
Pediatric quality of life									
Self-report									
Physical health score	83 (14)	83 (14)	0 (0)	83 (17)	83 (17)	0 (0)	83 (15)	83 (15)	0 (0)

Mean (SD)/median [IQR]/n (%)	Pub: Losartan (n=43)	DSIC: Losartan (n=43)	Diff. (n=0)	Pub: Placebo (n=40)	DSIC: Placebo (n=40)	Diff. (n=0)	Pub: Total (n=83)	DSIC: Total (n=83)	Diff. (n=0)
Psychosocial health score	75 (16)	75 (16)	0 (0)	76 (15)	76 (15)	0 (0)	75 (15)	75 (15)	0 (0)
Parent-proxy report									
Physical health score	72 (23)	72 (23)	0 (0)	68 (26)	68 (26)	0 (0)	70 (25)	70 (25)	0 (0)
Psychosocial health score	72 (18)	72 (18)	0 (0)	72 (19)	72 (19)	0 (0)	72 (18)	72 (18)	0 (0)

Attachment A: SAS Code

```
libname stop "X:\NIDDK\niddk-  
dr_studies6\NAFLD\private_orig_data\NASHCRN_STOP_NAFLD_PrimResults_13Oct22\3. SAS Datasets";
```

```
/*  
*****  
/* STOP-NAFLD DSIC Vos et al. */  
*****  
*/
```

```
data one; set stop.table1;  
run;
```

```
/*  
*****  
/* Demographics */  
*****  
*/
```

```
*age;  
proc means data=one n median q1 q3 std min max;  
var age;  
class trt;  
run;
```

```
proc means data=one n mean median min max;  
var age;  
run;
```

```
*sex;  
proc freq data=one;  
tables male*trt/norow;  
run;
```

```
*onset of menarche;  
proc freq data=one;  
tables menarche*trt/norow;  
run;
```

```
*white race;  
proc freq data=one;  
tables white*trt/norow;  
run;
```

```
*hispanic ethnicity;  
proc freq data=one;  
tables hispanic*trt/norow;  
run;
```

```
/*  
*****  
*/
```

```

/* Liver Enzymes */
/*****/

proc means data=one n mean std;
var alt ast alka ggt bilit bilid;
/*class trt;*/
run;

/*****/
/* Lipids/Chol */
/*****/

proc means data=one n mean std ;
var chol hdl ldl trig;
/*class trt; */
run;

/*****/
/* Metabolic factors */
/*****/

*fasting serum glucose;
proc means data=one n median q1 q3;
var glucose;
/*class trt; */
run;

*insulin;
proc means data=one n median q1 q3;
var insu;
/*class trt; */
run;

*HOMA-IR;
proc means data=one n median q1 q3;
var homair;
/*class trt; */
run;

proc means data=one n mean std;
var hba1c htc m wtkg bmi midarmcm waistcm hipcm waisthip sbp dbp pulse breathrate;
/*class trt; */
run;

/*****/
/* Laboratory Results */
/*****/

```

```

proc means data=one n mean std maxdec=2;
var hgb hema mcv wbc rbc neutrophils lymphocytes monocytes eosinophils basophils platelet na k
chloride
bicarbonate calcium bun cr egfr pt inr uric crp;
/*class trt; */
run;

```

```

/*****/
/* Comorbidities */
/*****/

```

```

proc freq data=one;
tables (cvd diabetes)*trt/norow;
run;

```

```

/*****/
/* Concomitant meds in past 6 mos */
/*****/

```

```

proc freq data=one;
tables (lipidrx diabrx obesityrx psychoticrx)*trt/norow;
run;

```

```

/*****/
/* Liver histology findings */
/*****/

```

```

*time from biopsy;
proc means data=one n mean std;
var bxtime;
/*class trt; */
run;

```

```

*steatohepatitis;
proc freq data=one;
tables nashdx*trt/norow;
run;

```

```

*fibrosis stage;
proc freq data=one;
tables fibro*trt/norow;
run;

```

```

proc means data=one n mean std;
var fibro nas;
/*class trt; */
run;

```



```
*hepatocellular ballooning score;  
proc freq data=one;  
tables balloon*trt/norow;  
run;
```

```
proc means data=one n mean std;  
var balloon;  
/*class trt; */  
run;
```

```
*steatosis score;  
proc freq data=one;  
tables steatosis*trt/norow;  
run;
```

```
proc means data=one n mean std;  
var steatosis;  
/*class trt; */  
run;
```

```
*lobular inflammation score;  
proc freq data=one;  
table lobinflam*trt/norow;  
run;
```

```
proc means data=one n mean std;  
var lobinflam;  
/*class trt; */  
run;
```

```
*portal inflammation score;  
proc freq data=one;  
tables portal*trt/norow;  
run;
```

```
proc means data=one n mean std;  
var portal;  
/*class trt; */  
run;
```

```
/******  
/* Pediatric quality of life */  
/******
```

```
proc means data=one n mean std;  
var physical psychosocial pphysical ppsychosocial;  
/*class trt; */  
run;
```