Baseline predictors of glycemic worsening in youth and adults with impaired glucose tolerance or recently-diagnosed type 2 diabetes in the Restoring Insulin Secretion (RISE) Study
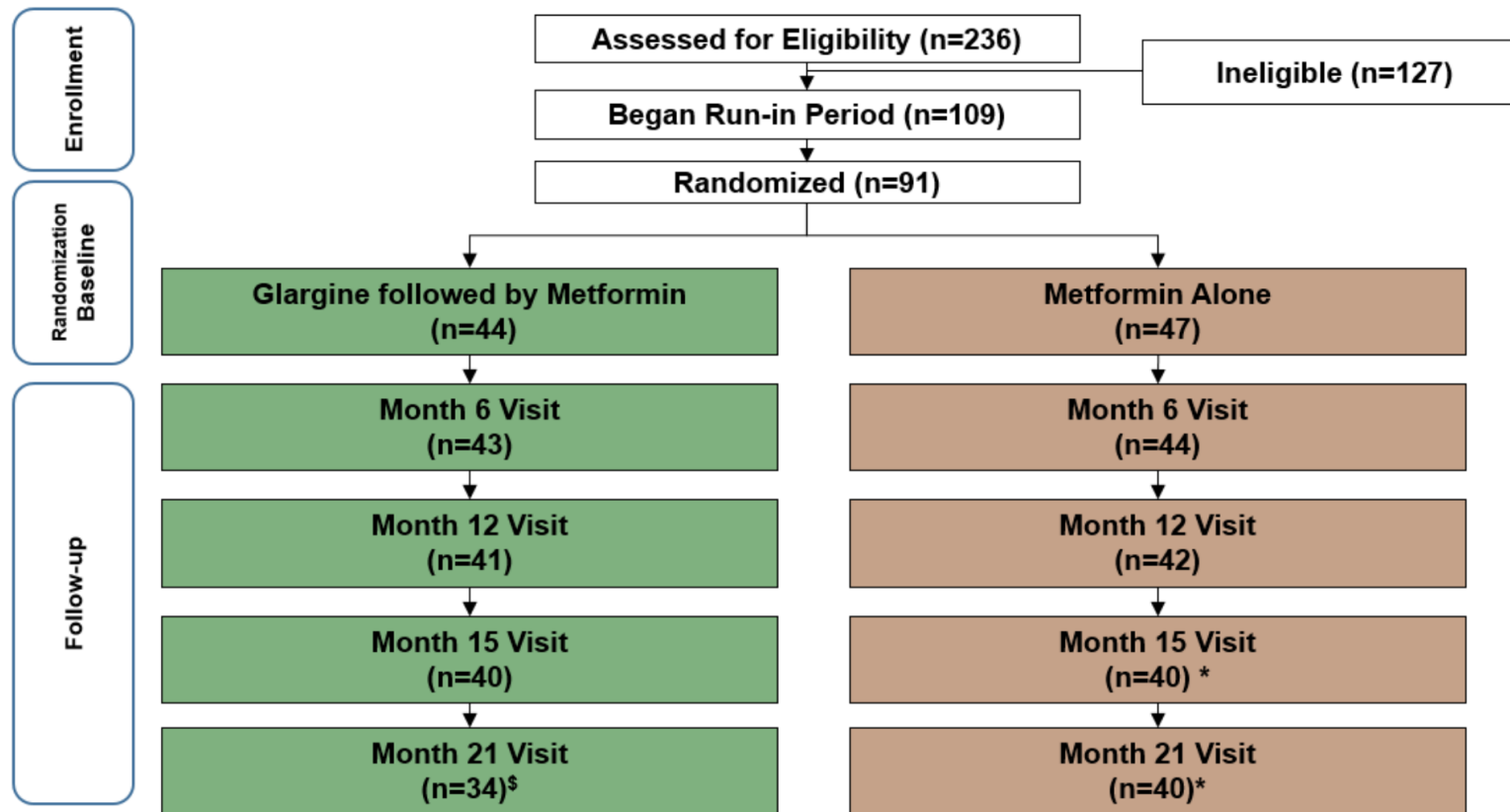
Supplemental Materials

1. Table S1
2. Figure S1
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Supplementary Table S1. Baseline characteristics of study participants

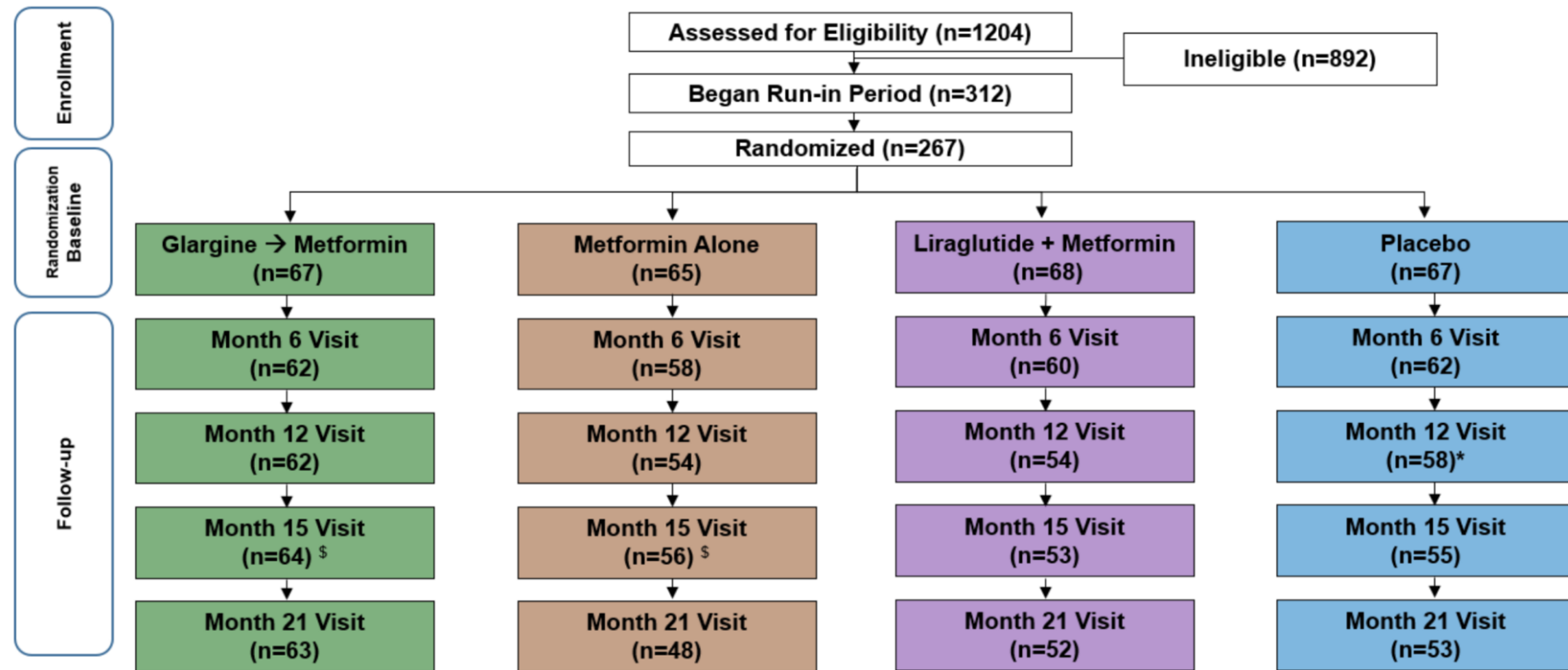|	Adult	Pediatric	p-value
N	267	91	
Age at randomization (years)	53.9 ± 8.9	14.4 ± 2.1	<0.001
Age Category (years)			<0.001
<=14	0 (0.0%)	48 (52.7%)	
15-19	0 (0.0%)	43 (47.3%)	
20-39	22 (12.3%)	0 (0.0%)	
40-49	48 (26.8%)	0 (0.0%)	
50-65	109 (60.9%)	0 (0.0%)	
Sex			<0.001
Female	114 (42.7%)	65 (71.4%)	
Male	153 (57.3%)	26 (28.6%)	
Race/Ethnicity			<0.001
White	141 (52.8%)	25 (27.5%)	
Black	81 (30.3%)	23 (25.3%)	
Hispanic (any)	28 (10.5%)	34 (37.4%)	
All other	17 (6.4%)	9 (9.9%)	
Weight (kg)	102.1 ± 19.8	99.8 ± 24.4	0.410
BMI (kg/m^2)	35.0 ± 5.7	36.7 ± 6.4	0.024
Diabetes status at screening			0.014
IGT	197 (73.8%)	54 (59.3%)	
Diabetes	70 (26.2%)	37 (40.7%)	
Laboratory values at baseline OGTT			
HbA1c (%)	5.75 ± 0.39	5.71 ± 0.58	0.556
HbA1c (mol/mmol)	39.30 ± 4.24	38.87 ± 6.37	0.556
Fasting glucose (mmol/L)	6.15 ± 0.63	6.01 ± 0.95	0.198
Fasting insulin (pmol/L)	105.3 [34.3, 323.8]	229.9 [74.9, 705.8]	<0.001
Fasting C-Peptide (nmol/L)	1.245 ± 0.507	1.711 ± 0.607	<0.001
2-hour glucose (mmol/L)	10.07 ± 2.29	10.20 ± 2.62	0.670
2-hour insulin (pmol/L)	790.1 [234.2, 2665.8]	1369.1 [346.6, 5407.9]	<0.001
1/Fasting insulin x 10^{-3} (1/(pmol/L))	11.1 ± 6.6	5.2 ± 3.6	<0.001
IGI (0-30m I/G) (pmol/mmol)	113.1 [27.2, 469.7]	226.5 [45.8, 1120.5]	<0.001
CPGI (0-30m CP/G) (nmol/mmol)	0.464 ± 0.280	0.741 ± 0.430	<0.001
Values during baseline hyperglycemic clamp			
ACPRg (nmol/L)	1.75 [0.99, 3.11]	2.35 [0.87, 6.35]	<0.001
SSCP (nmol/L)	3.95 [1.96, 7.98]	5.15 [2.39, 11.13]	<0.001
ACPRmax (nmol/L)	4.89 [2.03, 11.78]	7.72 [3.35, 17.77]	<0.001
M/I x 10^{-5}	3.064 [0.724, 12.965]	1.572 [0.353, 6.997]	<0.001

Supplementary Figure S1: CONSORT Diagram, RISE Pediatric Medication Study with OGTT data

$\$$4 participants in the metformin group decompensated at Months 15 and 18. No further visits were completed.

*2 participants in the glargine followed by metformin group decompensated between months 9 and 12, and 1 participant decompensated at M18. No further visits were completed.
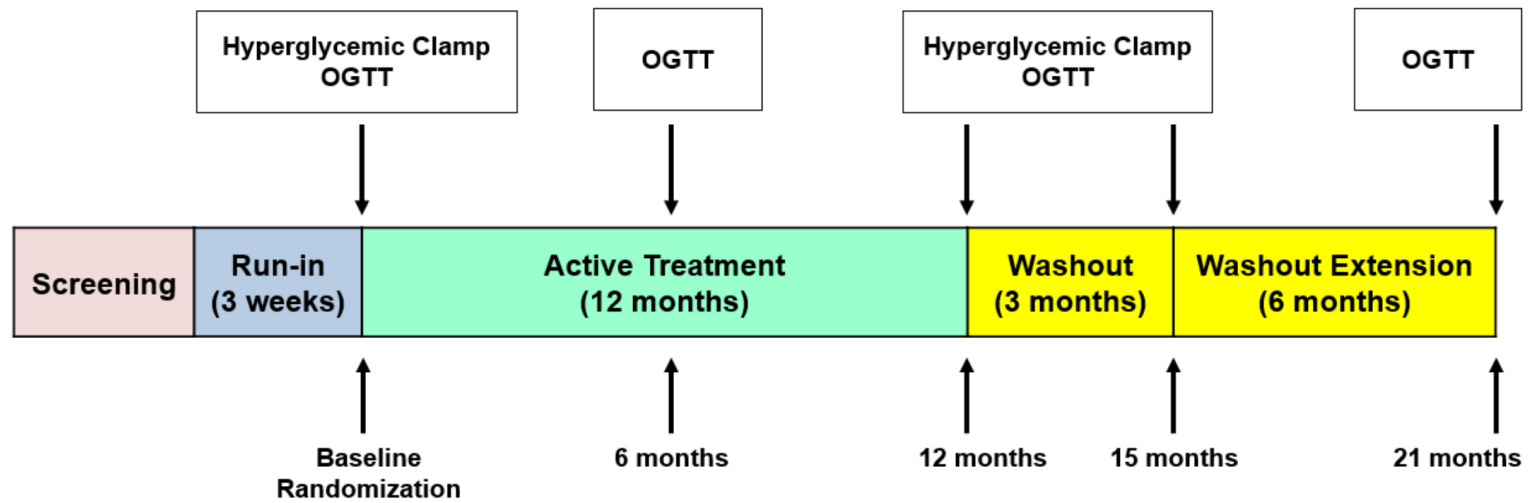
Supplementary Figure S2: CONSORT Diagram: RISE Adult Medication Study with OGTT data

Enrollment

Assessed for Eligibility (n=1204) → Ineligible (n=892)

Began Run-in Period (n=312)

Randomized (n=267)

Randomization Baseline

Glargine → Metformin (n=67)	Metformin Alone (n=65)	Liraglutide + Metformin (n=68)	Placebo (n=67)

Follow-up

Month 6 Visit (n=62)	Month 6 Visit (n=58)	Month 6 Visit (n=60)	Month 6 Visit (n=62)
Month 12 Visit (n=62)	Month 12 Visit (n=54)	Month 12 Visit (n=54)	Month 12 Visit (n=58)*
Month 15 Visit (n=64) $	Month 15 Visit (n=56) $	Month 15 Visit (n=53)	Month 15 Visit (n=55)
Month 21 Visit (n=63)	Month 21 Visit (n=48)	Month 21 Visit (n=52)	Month 21 Visit (n=53)

*1 participant in the placebo group decompensated at M12; No further visits were completed
$ 1 participant in the metformin group and 1 participant in the glargine followed by metformin group were put on metformin by their primary care provider after the M15 visit. No further visits were completed.
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Supplementary Figure S3: RISE Medication Studies Visit and Assessment Timeline

APPENDIX

RISE Consortium Investigators

University of Chicago Clinical Research Center and Jesse Brown VA Medical Center (Chicago, IL)
David A. Ehrmann, MD*
Karla A. Temple, PhD, RD**
Abby Rue**
Elena Barengolts, MD
Babak Mokhlesi, MD, MSc
Eve Van Cauter, PhD
Susan Sam, MD, MSc
M. Annette Miller, RN

VA Puget Sound Health Care System and University of Washington (Seattle, WA)
Steven E. Kahn, MB, ChB*
Karen M. Atkinson, RN**
Jerry P. Palmer, MD
Kristina M. Utzschneider, MD
Tsige Gebremedhin, BS
Abigail Kernan-Schloss, BA
Alexandra Kozedub, MSN, ARNP
Brenda K. Montgomery, RN, BSN, CDE
Emily J. Morse, BS

Indiana University School of Medicine and Richard L. Roudebush VA Medical Center (Indianapolis, IN)
Kieren J. Mather, MD*
Tammy Garrett, RN**
Tamara S. Hannon, MD
Amale Lteif, MD
Aniket Patel MD
Robin Chisholm, RN
Karen Moore, RN
Vivian Pirics, RN
Linda Pratt, RN

University of Colorado Denver/Children's Hospital Colorado (Denver, CO)
Kristen J. Nadeau, MD, MS*
Susan Gross, RD**
Philip S. Zeitler, MD, PhD
Jayne Williams, RN, MSN, CPNP
Melanie Cree-Green, MD, PhD
Yesenia Garcia Reyes, MS
Krista Vissat, RN, MSN, CPNP

Children's Hospital of Pittsburgh of UPMC (Pittsburgh, PA)
Silva A. Arslanian, MD*
Kathleen Brown, RN, CDE**
Nancy Guerra, CRNP
Kristin Porter, RN, CDE

Yale University (New Haven, CT)
Sonia Caprio, MD*
Mary Savoye, RD, CDE**
Bridget Pierpont, MS**

University of Southern California Keck School of Medicine/Kaiser Permanente Southern California (Los Angeles, CA)
Thomas A. Buchanan, MD*
Anny H. Xiang, PhD*
Enrique Trigo, MD**
Elizabeth Beale, MD
Fadi N. Hendee, MD
Namir Katkhouda, MD
Krishan Nayak, PhD
Mayra Martinez, MPH
Cortney Montgomery, BS
Xinhui Wang, PhD

George Washington University Biostatistics Center (RISE Coordinating Center; Rockville, MD)
Sharon L. Edelstein, ScM*
John M. Lachin, ScD
Ashley N. Hogan, MPH

Northwest Lipid Research Laboratories (Central Biochemistry Laboratory; Seattle, WA)
Santica Marcovina, PhD*
Jessica Harting**
John Albers, PhD

Belmar Pharmacy (Drug Distribution Center; Lakewood, CO)
Dave Hill

NIH/NIDDK (Bethesda, MD)
Peter J. Savage, MD
Ellen W. Leschek, MD

* denotes Principal Investigator
** denotes Program Coordinator