

SUPPLEMENTARY DATA

**Supplementary Table 1.** Baseline characteristics and OGTT-derived indices by BMI, in previously non-diabetic kidney transplant recipients  $\geq 6$  months post-transplantation (Stable KTRs) at MUV, grouped by OGTT outcome, and compared to the non-transplant population (Non-KTRs) at VGH

|                                 | <140 mg/dL                        |                                   |                  | 140-199 mg/dL                   |                                 |                  | $\geq 200$ mg/dL  |                   |                  |
|---------------------------------|-----------------------------------|-----------------------------------|------------------|---------------------------------|---------------------------------|------------------|-------------------|-------------------|------------------|
|                                 | Stable KTRs                       | Non-KTRs                          | p*               | Stable KTRs                     | Non-KTRs                        | p*               | Stable KTRs       | Non-KTRs          | p*               |
| <b>BMI <math>\geq 30</math></b> |                                   |                                   |                  |                                 |                                 |                  |                   |                   |                  |
| <b>No. of patients</b>          | 10                                | 153                               |                  | 3                               | 86                              |                  | 6                 | 47                |                  |
| <b>Age</b>                      | 57.2 $\pm$ 11.3                   | 51.4 $\pm$ 12.1                   | 0.15             | 64.1 $\pm$ 10.3                 | 58.0 $\pm$ 9.2                  | 0.26             | 59.3 $\pm$ 10.2   | 58.3 $\pm$ 10.1   | 0.83             |
| <b>Male sex [%]</b>             | 70.0                              | 46.4                              | 0.20**           | 33.3                            | 51.2                            | 0.62**           | 50.0              | 42.6              | 1.00**           |
| <b>BMI</b>                      | 31.9 $\pm$ 1.3                    | 33.7 $\pm$ 4.2                    | <b>0.003</b>     | 33.8 $\pm$ 1.9                  | 33.0 $\pm$ 3.1                  | 0.64             | 34.0 $\pm$ 4.4    | 33.7 $\pm$ 3.5    | 0.88             |
| <b>HbA1c</b>                    | 5.7 $\pm$ 0.4                     | 5.3 $\pm$ 0.6                     | 0.06             | 6.2 $\pm$ 0.3                   | 5.6 $\pm$ 0.7                   | 0.11             | 6.0 $\pm$ 0.9     | 5.9 $\pm$ 0.9     | 0.82             |
| <b>Glucose (0h)</b>             | 94 $\pm$ 6                        | 105 $\pm$ 15                      | <b>&lt;0.001</b> | 106 $\pm$ 28                    | 119 $\pm$ 15                    | 0.16             | 118 $\pm$ 25      | 132 $\pm$ 19      | 0.11             |
| <b>Glucose (2h)</b>             | 115 $\pm$ 15                      | 101 $\pm$ 24                      | 0.08             | 163 $\pm$ 18                    | 163 $\pm$ 17                    | 0.99             | 229 $\pm$ 28      | 239 $\pm$ 44      | 0.59             |
| <b>Insulin (0h)</b>             | 14.0 $\pm$ 9.8                    | 15.1 $\pm$ 13.0                   | 0.80             | 5.3 $\pm$ 3.4                   | 17.4 $\pm$ 12.4                 | 0.10             | 9.9 $\pm$ 3.7     | 18.8 $\pm$ 8.9    | <b>0.020</b>     |
| <b>Insulin (AUC)</b>            | 6.1 $\pm$ 2.5                     | 7.9 $\pm$ 4.8                     | 0.07             | 6.8 $\pm$ 2.6                   | 9.0 $\pm$ 4.5                   | 0.41             | 4.4 $\pm$ 2.4     | 8.0 $\pm$ 3.8     | <b>0.031</b>     |
| <b>IGI</b>                      | 0.085 $\pm$ 0.047                 | 0.090 $\pm$ 0.194                 | 0.83             | 0.088 $\pm$ 0.072               | 0.055 $\pm$ 0.037               | 0.15             | 0.028 $\pm$ 0.022 | 0.037 $\pm$ 0.025 | 0.46             |
| <b>OGIS</b>                     | 406 $\pm$ 31                      | 319 $\pm$ 55                      | <b>&lt;0.001</b> | 357 $\pm$ 36                    | 281 $\pm$ 43                    | <b>0.003</b>     | 334 $\pm$ 52      | 271 $\pm$ 36      | <b>&lt;0.001</b> |
| <b>QUICKI</b>                   | 0.41 $\pm$ 0.07                   | 0.38 $\pm$ 0.04                   | 0.32             | 0.46 $\pm$ 0.04                 | 0.37 $\pm$ 0.04                 | <b>&lt;0.001</b> | 0.39 $\pm$ 0.04   | 0.35 $\pm$ 0.03   | <b>&lt;0.001</b> |
| <b>BMI &lt;30</b>               |                                   |                                   |                  |                                 |                                 |                  |                   |                   |                  |
| <b>No. of patients</b>          | 45                                | 662                               |                  | 31                              | 252                             |                  | 10                | 157               |                  |
| <b>Age</b>                      | 46.1 $\pm$ 13.7                   | 51.4 $\pm$ 13.2                   | <b>0.009</b>     | 61.4 $\pm$ 11.9                 | 56.8 $\pm$ 11.5                 | <b>0.038</b>     | 64.5 $\pm$ 11.0   | 60.7 $\pm$ 10.7   | <b>&lt;0.001</b> |
| <b>Male sex [%]</b>             | 55.6                              | 63.6                              | 0.28             | 77.4                            | 61.1                            | 0.08**           | 70.0              | 67.5              | 1.00**           |
| <b>BMI</b>                      | 23.2 $\pm$ 3.4                    | 25.3 $\pm$ 2.7                    | <b>&lt;0.001</b> | 23.9 $\pm$ 2.9                  | 25.6 $\pm$ 2.5                  | <b>&lt;0.001</b> | 24.5 $\pm$ 3.8    | 25.9 $\pm$ 2.6    | 0.29             |
| <b>HbA1c</b>                    | 5.5 $\pm$ 0.5                     | 5.3 $\pm$ 0.7                     | <b>0.005</b>     | 5.9 $\pm$ 0.6                   | 5.6 $\pm$ 0.7                   | <b>0.021</b>     | 6.4 $\pm$ 0.9     | 5.9 $\pm$ 0.9     | 0.11             |
| <b>Glucose (0h)</b>             | 88 $\pm$ 10                       | 103 $\pm$ 16                      | <b>&lt;0.001</b> | 98 $\pm$ 13                     | 117 $\pm$ 15                    | <b>&lt;0.001</b> | 110 $\pm$ 21      | 131 $\pm$ 19      | <b>&lt;0.001</b> |
| <b>Glucose (2h)</b>             | 106 $\pm$ 25                      | 98 $\pm$ 23                       | <b>0.028</b>     | 165 $\pm$ 17                    | 165 $\pm$ 16                    | 0.98             | 242 $\pm$ 46      | 252 $\pm$ 46      | 0.51             |
| <b>Insulin (0h)</b>             | 5.9 $\pm$ 3.3                     | 9.5 $\pm$ 5.2                     | <b>&lt;0.001</b> | 8.9 $\pm$ 7.1                   | 10.3 $\pm$ 4.3                  | 0.31             | 5.9 $\pm$ 4.9     | 12.9 $\pm$ 8.7    | <b>0.012</b>     |
| <b>Insulin (AUC)</b>            | 4.5 $\pm$ 2.4                     | 5.6 $\pm$ 3.0                     | <b>0.022</b>     | 5.5 $\pm$ 3.2                   | 6.1 $\pm$ 3.1                   | 0.37             | 2.8 $\pm$ 1.4     | 5.6 $\pm$ 3.1     | <b>&lt;0.001</b> |
| <b>IGI</b>                      | <b>0.081<math>\pm</math>0.056</b> | <b>0.059<math>\pm</math>0.074</b> | <b>0.021</b>     | 0.065 $\pm$ 0.087               | 0.033 $\pm$ 0.025               | 0.06             | 0.019 $\pm$ 0.011 | 0.024 $\pm$ 0.019 | 0.41             |
| <b>OGIS</b>                     | 455 $\pm$ 65                      | 337 $\pm$ 51                      | <b>&lt;0.001</b> | <b>391<math>\pm</math>53</b>    | <b>300<math>\pm</math>42</b>    | <b>&lt;0.001</b> | 378 $\pm$ 52      | 286 $\pm$ 44      | <b>&lt;0.001</b> |
| <b>QUICKI</b>                   | 0.47 $\pm$ 0.06                   | 0.41 $\pm$ 0.04                   | <b>&lt;0.001</b> | <b>0.44<math>\pm</math>0.07</b> | <b>0.39<math>\pm</math>0.03</b> | <b>0.001</b>     | 0.46 $\pm$ 0.07   | 0.38 $\pm$ 0.03   | <b>0.005</b>     |

\*Stable KTRs versus Non-KTRs; \*\*Fisher's exact test. Boldface numbers indicate findings with  $p < 0.05$ . Abbreviations and units: BMI=body mass index [ $\text{kg}/\text{m}^2$ ]; HbA1c=glycated hemoglobin [rel. %]; 2h=two hours; AUC=area under the curve (for insulin: [ $\text{mU}/\text{mL}$  2h]); IGI=insulinogenic index [ $\text{nmol}$  insulin/ $\text{mmol}$  glucose]; OGIS=oral glucose insulin sensitivity [ $\text{mL}/\text{min}$   $\text{m}^2$ ]; QUICKI=quantitative insulin sensitivity check index [unitless].

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**Supplementary Table 2.** Estimates for OGTT-derived indices in previously non-diabetic kidney transplant recipients  $\geq 6$  months post-transplantation (Stable KTRs) at MUV, compared to the non-transplant population (Non-KTRs) at VGH

|             |                                 | Stable KTRs versus Non-KTRs |                       |               |                       |
|-------------|---------------------------------|-----------------------------|-----------------------|---------------|-----------------------|
|             |                                 | Unadjusted                  |                       | Adjusted*     |                       |
|             |                                 | Estimate                    | 95% CI                | Estimate      | 95% CI                |
| AUC insulin | 2-hour glucose <140 mg/dL       | <b>-1.19</b>                | <b>(-2.16,-0.23)</b>  | -0.56         | (-1.46,0.35)          |
|             | 2-hour glucose 140-199 mg/dL    | -0.78                       | (-2.02,0.47)          | -0.05         | (-1.22,1.13)          |
|             | 2-hour glucose $\geq 200$ mg/dL | <b>-2.74</b>                | <b>(-4.55,-0.94)</b>  | <b>-2.87</b>  | <b>(-4.55,-1.19)</b>  |
| IGI         | 2-hour glucose <140 mg/dL       | 0.01                        | (-0.01,0.04)          | 0.02          | (-0.01,0.04)          |
|             | 2-hour glucose 140-199 mg/dL    | 0.03                        | (0.00,0.06)           | <b>0.04</b>   | <b>(0.01,0.07)</b>    |
|             | 2-hour glucose $\geq 200$ mg/dL | 0.00                        | (-0.05,0.04)          | 0.00          | (-0.05,0.04)          |
| OGIS        | 2-hour glucose <140 mg/dL       | <b>112.45</b>               | <b>(98.90,126.00)</b> | <b>103.56</b> | <b>(90.61,116.52)</b> |
|             | 2-hour glucose 140-199 mg/dL    | <b>93.30</b>                | <b>(75.81,110.79)</b> | <b>90.63</b>  | <b>(73.89,107.37)</b> |
|             | 2-hour glucose $\geq 200$ mg/dL | <b>79.27</b>                | <b>(54.05,104.50)</b> | <b>82.17</b>  | <b>(58.19,106.16)</b> |
| QUICKI      | 2-hour glucose <140 mg/dL       | <b>0.05</b>                 | <b>(0.04,0.06)</b>    | <b>0.04</b>   | <b>(0.03,0.05)</b>    |
|             | 2-hour glucose 140-199 mg/dL    | <b>0.05</b>                 | <b>(0.04,0.06)</b>    | <b>0.04</b>   | <b>(0.03,0.05)</b>    |
|             | 2-hour glucose $\geq 200$ mg/dL | <b>0.07</b>                 | <b>(0.04,0.09)</b>    | <b>0.07</b>   | <b>(0.05,0.09)</b>    |

Subject Ns are the same as for stable KTRs and Non-KTRs in Table 3. Each outcome was regressed on glucose category, transplant status, and an interaction term to produce estimates in each glucose stratum, both unadjusted and \*adjusted for age, sex, and body mass index. Boldface numbers indicate findings with  $p < 0.05$ . Abbreviations and units: AUC=area under the curve (for insulin: [mU/mL 2h]); IGI=insulinogenic index [nmol insulin/mmol glucose]; OGIS=oral glucose insulin sensitivity [mL/min  $m^2$ ]; QUICKI=quantitative insulin sensitivity check index [unitless].