Retinal vascular changes and right ventricular structure and function:

The MESA-Right Ventricle and MESA-Eye Studies

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Supplemental Material

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Supplementary Table 1: Linear Regression Models of Central Retinal Venular Equivalent and Right Ventricular Function in Subjects with Pulmonary Data (N = 2477, 1248 women and 1229 men)

|                              | Male | | | | Female | | | |
|------------------------------|------|---|---|---|------|---|---|---|
|                              | Beta†| SE | P value† | Beta† | SE | P value† |
| Right ventricle end-diastolic mass, g | | | | | | |
| Basic model*                 | -0.14| 0.89 | 0.13 | -0.06| 0.86 | 0.48 |
| Full model**                 | -0.09| 0.89 | 0.29 | -0.01| 0.85 | 0.89 |
| Full model + LV mass         | -0.05| 0.08 | 0.52 | 0.03 | 0.08 | 0.69 |
| Right ventricle end-diastolic volume, ml | | | | | | |
| Basic model*                 | -1.47| 0.59 | 0.01 | -0.35| 0.57 | 0.54 |
| Full model**                 | -1.06| 0.58 | 0.07 | 0.08 | 0.56 | 0.88 |
| Full model + LV end-diastolic volume | -1.04| 0.44 | 0.02 | 0.42 | 0.42 | 0.32 |
| Right ventricle end-systolic volume, ml | | | | | | |
| Basic model*                 | 0.15 | 0.29 | 0.61 | -0.12| 0.30 | 0.68 |
| Full model**                 | 0.20 | 0.30 | 0.51 | -0.02| 0.29 | 0.94 |
| Full model + LV end-systolic volume | -0.15| 0.28 | 0.59 | 0.14 | 0.26 | 0.58 |
| Right ventricle stroke volume, ml | | | | | | |
| Basic model*                 | -1.62| 0.44 | <0.001| -0.23| 0.42 | 0.58 |
| Full model**                 | -1.26| 0.43 | 0.003 | 0.10 | 0.41 | 0.80 |
| Right ventricle ejection fraction, % | | | | | | |
| Basic model*                 | -0.41| 0.16 | 0.01 | -0.11| 0.17 | 0.44 |
| Full model**                 | -0.36| 0.17 | 0.03 | -0.10| 0.16 | 0.64 |
| Full model + LV ejection fraction | -0.14| 0.16 | 0.38 | -0.08| 0.15 | 0.64 |

*Basic model includes: age, sex, race/ethnicity, education, height, weight, waist circumference
**Full model includes: Basic model + alcohol consumption, smoking (status and pack years), total cholesterol, HDL, hypertension, lipid-lowering medication, diabetes, hemoglobin A1c, serum creatinine, FEV1, FVC, cotinine, % of emphysema on CT scan, type of CT scanner
†Beta (per 20μm increase) and p value derived from multivariate linear regression
### Supplementary Table 2: Linear Regression Models of Central Retinal Arteriolar Equivalent and Right Ventricular Function in Selected Subjects with Pulmonary Data

|                          | Male          | Female         | Male          | Female         |
|--------------------------|---------------|----------------|---------------|----------------|
|                          | Beta†         | P value†       | Beta†         | P value†       |
| **Right ventricle end-diastolic mass, g** |               |                |               |                |
| Basic model*             | -0.03         | 0.14           | 0.85          | 0.14           |
| Full model**             | -0.14         | 0.14           | 0.31          | 0.14           |
| Full model + LV mass     | -0.22         | 0.13           | 0.09          | 0.13           |
| **Right ventricle end-diastolic volume, ml** |               |                |               |                |
| Basic model*             | -1.43         | 0.91           | 0.12          | 0.91           |
| Full model**             | -2.34         | 0.89           | 0.01          | 0.89           |
| Full model + LV end-diastolic volume | -0.86         | 0.67           | 0.20          | 0.67           |
| **Right ventricle end-systolic volume, ml** |               |                |               |                |
| Basic model*             | -1.56         | 0.47           | <0.001        | 0.47           |
| Full model**             | -1.63         | 0.47           | <0.001        | 0.46           |
| Full model + LV end-systolic volume | -0.92         | 0.42           | 0.03          | 0.42           |
| **Right ventricle stroke volume, ml** |               |                |               |                |
| Basic model*             | 0.13          | 0.67           | 0.85          | 0.67           |
| Full model**             | -0.71         | 0.66           | 0.29          | 0.66           |
| Full model + LV ejection fraction | 0.32          | 0.24           | 0.18          | 0.24           |

*Basic model includes: age, sex, race/ethnicity, education, height, weight, waist circumference

**Full model includes: Basic model + alcohol consumption, smoking (status and pack years), total cholesterol, HDL, hypertension, lipid-lowering medication, diabetes, hemoglobin A1c, serum creatinine, FEV1, FVC, cotinine, % of emphysema on CT scan, type of CT scanner

†Beta (per 20μm decrease) and p value derived from multivariate linear regression