

## Appendix E1

Inclusion and exclusion criteria for the Factor-64 study are listed below and at <http://clinicaltrials.gov/ct2/show/NCT00488033>.

### Inclusion Criteria

1. Age: men aged at least 50 years and women aged at least 55 years with a history of diabetes mellitus (previous documentation of fasting glucose level  $\geq 126$  mg/dL or HbA<sub>1C</sub>  $> 6.5\%$ ), either type 1 or type 2, documented for at least 3 years and on medication for at least 1 year.
2. Age: men aged at least 40 years and women aged at least 45 years with a history of diabetes mellitus (previous documentation of fasting glucose level  $\geq 126$  mg/dL or HbA<sub>1C</sub> level  $> 6.5\%$ ), either type 1 or type 2, documented for at least 5 years and on medication for at least 1 year.
3. The patient or legally authorized representative must provide written informed consent, before the procedure, using a form that is approved by the local institutional review board.

### Exclusion Criteria

1. Known coronary artery disease (stenosis  $> 70\%$ , history of myocardial infarction, or angina).
2. Symptomatic cerebral vascular disease (history of transient ischemic attack, cerebrovascular accident, or cerebrovascular [carotid or cerebral arteries] revascularization).
3. Symptomatic peripheral vascular disease (history of claudication, amputation, or peripheral [including renal arteries] arterial revascularization).
4. Treatment with any other investigational drug within the previous 30 days.
5. Any therapy or condition that would pose a risk to the patient or make it difficult to comply with study requirements.
6. Pregnant and/or lactating women and women of child-bearing potential not using acceptable means of contraception. Women of childbearing potential must be using adequate measures of contraception (as determined by the investigator) to avoid pregnancy and should be highly unlikely to conceive during the study period. Women of childbearing potential must have a negative pregnancy test at screening.
7. Any life-threatening condition or significant co-morbidity such that primary screening is inappropriate.

**Table E1. Inter- and Intrareader Reproducibility**

Parameter	Intraclass Correlation Coefficient	95% Confidence Interval
Interreader reproducibility		
Total		
PVI	0.96	0.89, 0.99

SPI	0.96	0.87, 0.99
FPI	0.97	0.90, 0.99
CPI	0.99	0.96, 0.99
Proximal		
PVI	0.97	0.91, 0.99
SPI	0.97	0.91, 0.99
FPI	0.95	0.86, 0.99
CPI	0.99	0.97, 0.99
Intrareader reproducibility (n = 10)		
Reader 1		
Total		
PVI	0.98	0.93, 0.99
SPI	0.98	0.90, 0.99
FPI	0.99	0.96, 0.99
CPI	0.99	0.98, 0.99
Proximal		
PVI	0.99	0.96, 0.99
SPI	0.98	0.92, 0.99
FPI	0.99	0.98, 0.99
CPI	0.99	0.99, 0.99
Reader 2		
Total		
PVI	0.93	0.72, 0.98
SPI	0.95	0.79, 0.99
FPI	0.93	0.73, 0.98
CPI	0.99	0.96, 0.99
Proximal		
PVI	0.99	0.98, 0.99
SPI	0.99	0.96, 0.99
FPI	0.98	0.94, 0.99
CPI	0.99	0.98, 0.99

Note.—CPI = calcified PVI, FPI = fibrous PVI, SPI = soft PVI.

**Table E2. Correlation between Proximal and Total Plaque Analysis in Diabetic and Nondiabetic Populations**

Parameter	<i>r</i>	<i>P</i> Value	95% Confidence Interval
Diabetic patients (n = 104)			
PVI	0.82	<.0001	0.74, 0.87
Soft PVI	0.89	<.0001	0.85, 0.93
Fibrous PVI	0.88	<.0001	0.84, 0.92
Calcified PVI	0.90	<.0001	0.85, 0.93
Nondiabetic patients (n = 25)			
PVI	0.80	<.0001	0.58, 0.91
Soft PVI	0.75	<.0001	0.50, 0.88
Fibrous PVI	0.92	<.0001	0.82, 0.96
Calcified PVI	0.91	<.0001	0.80, 0.96

**Table E3. Univariate and Multivariate Predictors of Percentage Fibrous and Calcified Plaque Fraction**

Variable	Percentage Fibrous Plaque Fraction				Percentage Calcified Plaque Fraction			
	Univariate Analysis		Multivariate Analysis		Univariate Analysis		Multivariate Analysis	
	$\beta^*$	<i>P</i> Value	$\beta^*$	<i>P</i> Value	$\beta^*$	<i>P</i> Value	$\beta^*$	<i>P</i> Value

Age (y)	-0.33	<.0001	-0.3	<.0001	0.34	<.0001	0.31	<.0001
Sex (male)	0.1	.13	...	...	-0.06	.42	...	...
Type of diabetes (type 2)	0.04	.54	...	...	-0.06	.41	...	...
Duration of diabetes (log years)	-0.15	.03	...	...	0.18	.009	...	...
HbA <sub>1c</sub> level (%)	0.05	.51	...	...	-0.05	.54	...	...
BMI (kg/m <sup>2</sup> )	0.18	.009	0.13	.05	-0.24	.001	-0.19	.004
Hypertension (positive)	-0.05	.42	...	...	0.05	.45	...	...
HDL-C level (mg/dL)	0.002	.98	...	...	0.01	.87	...	...
LDL-C level (mg/dL)	0.009	.9	...	...	0.006	.93	...	...
Creatinine level (mg/dL)	-0.02	.73	...	...	0.04	.52	...	...
Statin use (positive)	0.02	.79	...	...	-0.06	.36	...	...
Insulin use (positive)	0.03	.64	...	...	-0.007	.92	...	...
Smoking history (positive)	-0.02	.78	...	...	-0.004	.96	...	...

Note.—Standard deviations are as follows: percentage fibrous plaque fraction = 10.7%, percentage calcified plaque fraction = 17.9%, age = 8.0 years, HbA<sub>1c</sub> level = 1.2%, BMI = 5.9 kg/m<sup>2</sup>, HDL-C level = 11.5 mg/dL, LDL-C level = 22.0 mg/dL, creatinine level = 0.2 mg/dL, duration of diabetes = 0.7 log year.

\* Data are standardized  $\beta$  coefficients.

**Table E4. Univariate and Multivariate Predictors of PVI and Percentage Soft Plaque in the Factor-64 Population**

Variable	PVI				Percentage Soft Plaque Fraction			
	Univariate Analysis		Multivariate Analysis		Univariate Analysis		Multivariate Analysis	
	$\beta^*$	<i>P</i> Value	$\beta^*$	<i>P</i> Value	$\beta^*$	<i>P</i> Value	$\beta^*$	<i>P</i> Value
Age (y)	0.25	<.0001	0.32	<.0001	-0.24	<.0001	-0.16	.01
Sex (male)	0.32	<.0001	0.36	<.0001	-0.08	.24	...	...
Type of diabetes (type 2)	0.13	.05	...	...	0.07	.31	...	...
Duration of diabetes (log years)	0.18	.007	0.14	.03	-0.19	.006	...	...
HbA <sub>1c</sub> level (%)	0.06	.47	...	...	0.02	.79	...	...
BMI (kg/m <sup>2</sup> )	0.17	.02	0.26	<.0001	0.28	<.0001	0.17	.01
Hypertension (positive)	0.24	<.0001	...	...	-0.03	.71	...	...
HDL-C level (mg/dL)	-0.26	<.0001	...	...	-0.04	.59	...	...
LDL-C level (mg/dL)	-0.05	.49	...	...	-0.04	.58	...	...
Creatinine level (mg/dL)	0.23	.001	...	...	-0.08	.25	...	...
Statin use (positive)	-0.02	.74	...	...	0.14	.03	...	...
Insulin use (positive)	-0.04	.6	...	...	-0.05	.42	...	...
Smoking history (positive)	-0.006	.93	...	...	0.06	.41	...	...
RCA attenuation	-0.023	.73	...	...	-0.33	<.0001	-0.27	<.0001

Note.—Standard deviations are as follows: PVI = 2.7 mm<sup>2</sup>, percentage soft plaque fraction = 4.4%, age = 8.0 years, HbA<sub>1c</sub> level = 1.2%, BMI = 5.9 kg/m<sup>2</sup>, HDL-C level = 11.5 mg/dL, LDL-C level = 22.0 mg/dL, creatinine level = 0.2 mg/dL, RCA attenuation = 79.4 HU, duration of diabetes = 0.7 log year. RCA = right coronary artery.

\* Data are standardized  $\beta$  coefficients.