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CVH-CRG: The reluctance to prescribe
proprotein convertase subtilisin/kexin type 9
inhibitors to patients needing more intensive
therapy: who, how, and why?

Sponsor(s):

Prepared
by:

PCORnet Cardiovascular Health
Collaborative Research Group
(CVH CRG)

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Glossary of Acronyms

ASCVD	Atherosclerotic cardiovascular disease
CDM	Common Data Model
CRN	Clinical Research Network
DCRI	Duke Clinical Research Institute
DBP	Diastolic blood pressure
HDL-C	High-density lipoprotein cholesterol
LDL-C	Low-density lipoprotein cholesterol
MI	Myocardial infarction
PCSK9i	Proprotein convertase subtilisin/kexin type 9 inhibitor
PVD	Peripheral vascular disease
SBP	Systolic blood pressure
SD	Standard Deviation
TIA	Transient ischemic stroke
TG	Triglyceride

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OVERVIEW

The purpose of this document is to describe in detail the functional requirements as intended by the CVH-CRG: “The reluctance to prescribe proprotein convertase subtilisin/kexin type 9 inhibitors to patients needing more intensive therapy: who, how, and why?” protocol. Specifically, this document will provide an outline of the request, the concepts of interest, eligibility criteria and data sources. The requirements defined below will be utilized in the development of the Query Technical Specifications for queries throughout the life of the project.

The DCRI Coordinating Center must approve the CRN DataMart for use through a process called data curation. However, this approval does not guarantee availability of data for all outcomes that a study may wish to obtain. The current list of sites of interest are OneFlorida and REACHnet. It is important that the PI, in collaboration with the DCRI Coordinating Center, emphasizes the importance of consistent and timely maintenance of key study variables in their CDM to participating sites.

Protocol version: []

1. Request Description

Research question	Of adults with diabetes or a prior cardiovascular event taking a statin and have an LDL-C ≥ 70 , who is receiving PCSK9i?
Research objectives	<p><u>Primary objective</u></p> <ol style="list-style-type: none">Determine use of PCSK9i<ol style="list-style-type: none">in patients with diabetes or a prior cardiovascular event (PVD, MI, ischemic stroke, hemorrhagic stroke, hyperlipidemia, coronary artery disease) on a statin with an LDL-C ≥ 70 <p><u>Secondary objectives</u></p> <ol style="list-style-type: none">Compare demographics, comorbidities, medications between those who have been prescribed a PCSK9i and those who have notInvestigate insurance typePrescription pattern with the dramatic lowering of PCSK9-I pricingInvestigate statin dose (most recent PRESCRIBING record)
Study population and sample size	Patients ≥ 18 with a prior cardiovascular event or diabetes

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	<p>Group 1: Prescribed PCSK9i (statin record) Group 2: Prescribed PCSK9i (high dose statin) Group 3: Not Prescribed PCSK9i (statin record) Group 4: Not Prescribed PCSK9i (high dose statin) Total: Patients >=18 with at least one encounter January 01, 2015-March 31, 2019 with prior cardiovascular event or diabetes, a statin prescription and LDL-C>=70)</p>
Query timeframes of interest (e.g. baseline, measurement period)	January 1, 2015-March 31, 2019
Query type	<input type="checkbox"/> Cohort Identification query <input checked="" type="checkbox"/> Prep-to-research query <input type="checkbox"/> Study-specific data characterization query <input type="checkbox"/> Analytic query
Frequency of query	One time
How will dates be handled? <i>Refer to Appendix A</i>	<input checked="" type="checkbox"/> Actual <input type="checkbox"/> Time to Event <input type="checkbox"/> Other (explain) <input type="checkbox"/> N/A
Level of PHI Disclosure (Work with Project Leader to confirm matches IRB approval)	<p><i>Select the appropriate option for the query and describe rationale for the selection:</i></p> <input type="checkbox"/> Limited Data Set <input checked="" type="checkbox"/> Aggregate <input type="checkbox"/> De-identified <input type="checkbox"/> PHI All data can be returned in aggregate

2. Query Inclusion/Exclusion Criteria

Protocol Criteria	Query Criteria	Inclusion/Exclusion
Ages 18-110	On January 01, 2015	Inclusion
Male or Female sex	Sex (Male, Female)	
Diabetes or prior cardiovascular event (MI, stroke, or revascularization for peripheral vascular disease)	Diabetes or prior cardiovascular event between January 01, 2015 and March 31, 2019	Inclusion
No prior history of PCSK9i prior to diabetes or cardiovascular event	If PCSK9i PRESCRIBING event prior to diabetes or cardiovascular event patient can be excluded	Inclusion
Presence of a statin PRESCRIBING record	Have a statin PRESCRIBING record January 01, 2015-March 31, 2019.	Inclusion

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	<p>LIMITATION: PRESCRIBING.RX_DOSE_ORDERED is anticipated to be a limitation as it may not always be present in the PRESCRIBING record. When available the PRESCRIBING.RX_DOSE_ORDERED will be considered. The dose of the Rxnorm cui is not being assessed because a statin Rxnorm cui dose dataset is currently unavailable and additional order instructions may be needed.</p>	
LDL-C>=70 mg/dL	<p>Have a LDL-C LAB_RESULT_CM record January 01, 2015-March 31, 2019.</p> <p>For those on PCSK9i, assess the record closest prior to starting PCSK9i. For those not on PCSK9i, assess the most recent record.</p> <p>LIMITATION: LAB_RESULT_CM.RESULT_UNIT is anticipated to be a limitation as it may not always be present in the LAB_RESULT_CM record. Some LOINC may not be included in the analysis because unit associated with the LOINC may not be specific.</p> <p>To convert Total cholesterol, HDL, and LDL mmol/L to mg/dL the LAB_RESULT_CM.RESULT_NUM will be multiplied by 38.67</p> <p>To convert Triglycerides from mmol/L to mg/dL the LAB_RESULT_CM.RESULT_NUM will be multiplied by 88.57</p>	Inclusion
Alive	No DEATH record within one year of Diabetes diagnosis or cardiovascular event	Inclusion
Encounter	ENCOUNTER.ENC_TYPE (Ambulatory, Emergency Department, Emergency	Inclusion

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	Department to Inpatient Hospital Stay, Inpatient Hospital Stay, Non-Acute Institutional Stay, Observational Stay, Institutional Professional Consult, Other Ambulatory Visit, No Information, Unknown, Other) between January 01, 2015 and March 31, 2019	
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3. Concepts of Interest, Data Sources and Parameters

Reference Proposal table can be found in Appendix A.

Codes linked to concepts listed in table below are based upon:

- Diagnoses: ICD9/ICD10
- Procedures: ICD9/ICD10, CPT, HCPCS.
- Medications: RxNORM concept identifier (CUI)
- Labs: LOINC

Category	Concept	Tables and sources (e.g. CDM*, EDC, MEDICARE, REGISTRY)	Concept description and parameters (type, values, timeframes, restrictions)
Patient attributes (e.g. DOB, sex, race, ethnicity)	Age	CDM.DEMOGRAPHIC	Age at the index date (01 January 2015).
	DOB	N/A	N/A
	Race	CDM.DEMOGRAPHIC	Categorical (American Indian/Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, Black or African American, White, Other/unknown) values at baseline.
	Hispanic	CDM.DEMOGRAPHIC	Categorical (Hispanic or Latino Not Hispanic or Latino Other/unknown) values at baseline.
	Sex	CDM.DEMOGRAPHIC	Percent male (Female, Male)
	Death	CDM.DEATH	Y/N Died within study period
Comorbidity information	Obesity	CDM.DIAGNOSIS	Presence of condition January 01, 2015-March 31, 2019

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(e.g. past history of diabetes, prior use of therapies)	<i>Hypertension-at an ambulatory visit</i>	<i>CDM.DIAGNOSIS (DIAGNOSIS.ENC_TYPE='AV')</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
	<i>Chronic Kidney Disease</i>	<i>CDM.DIAGNOSIS</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
	<i>PVD</i>	<i>CDM.DIAGNOSIS</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
	<i>MI</i>	<i>CDM.DIAGNOSIS</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
	<i>Ischemic stroke</i>	<i>CDM.DIAGNOSIS</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
	<i>Hemorrhagic stroke</i>	<i>CDM.DIAGNOSIS</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
	<i>TIA</i>	<i>CDM.DIAGNOSIS</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
	<i>Diabetes</i>	<i>CDM.DIAGNOSIS</i>	<i>Presence of condition January 01, 2015-March 31, 2019</i>
Events/outcomes (e.g. myocardial infarction, death, all-cause hospitalization)	<i>PCSK9i</i>	<i>CDM.PRESCRIBING</i>	<i>PCSK9i record or No PCSK9i record</i>
	<i>Statin Dose</i>	<i>CDM.PRESCRIBING</i>	<i>Comparison of statin record vs high dose statin</i>
Labs tests (e.g. serum creatinine)	<i>LDL-C</i>	<i>CDM.LAB_RESULTS_CM</i>	<i>Lab results between January 01, 2015-March 31, 2019</i>
	<i>HDL-C</i>	<i>CDM.LAB_RESULTS_CM</i>	<i>Lab results between January 01, 2015-March 31, 2019</i>
	<i>Total Cholesterol (for ASCVD risk score)</i>	<i>CDM.LAB_RESULTS_CM</i>	<i>Lab results between January 01, 2015-March 31, 2019</i>
	<i>TG</i>	<i>CDM.LAB_RESULTS_CM</i>	<i>Lab results between January 01, 2015-March 31, 2019</i>
	<i>No Labs of interest (HDL-C, TG)</i>	<i>CDM.LAB_RESULTS_CM</i>	<i>Lab results between January 01, 2015-March 31, 2019</i>
Medication classes with generic drug names (e.g. anti-diabetic agents (metformin, insulin))	<i>Non-Lipid Lowering Cardiovascular Medications</i>	<i>CDM.PRESCRIBING</i>	<i>ACE inhibitor ARB CCB Beta Blocker Thiazide diuretics Aldosterone antagonists Any Non-lipid Lowering Cardiovascular Medication</i>
	<i>Statins</i>	<i>CDM.PRESCRIBING</i>	<i>Lovastatin Simvastatin Atorvastatin Pravastatin</i>

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			<p>Rosuvastatin Pitavastatin Fluvastatin Any Statin</p>
	Statin Dose	CDM.PRESCRIBING	<p>Missing/Outlier High dose</p> <ul style="list-style-type: none"> Atorvastatin 40-80mg Rosuvastatin 20(40) mg <p>Not high dose</p>
	Non-Statins Therapies	CDM.PRESCRIBING	<p>Ezetimibe Colesevelam Cholestyramine Colestipol Any Non-Statins Therapies</p>
	PCSK9 inhibitors	CDM.PRESCRIBING	<p>Evolocumab Alirocumab Any PCSK9 inhibitor</p>
	Lipid lowering prescription	CDM.PRESCRIBING	<p>Any lipid lowering prescription(Ezetimibe Colesevelam Cholestyramine Colestipol Evolocumab Alirocumab)</p>
	Triglyceride lowering drugs	CDM.PRESCRIBING	<p>Gemfibrozil Fenofibrate Fenofibric acid Icosapent ethyl Omega-3-acid ethyl acids Omega-3-carboxylic acids Niacin Any Triglyceride lowering drugs</p>
Other information	Current smoker	CDM.VITAL	<p>Most recent record with smoking information available</p> <p>Smoker VITAL.SMOKING in ('01' '02' '07' '08') or VITAL.TOBACCO_TYPE in ('01' '03' '05') AND VITAL.TOBACCO = '01'</p> <p>Non-smoker VITAL.SMOKING in ('03' '04') or VITAL.TOBACCO in ('02' '03')</p>

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	<i>SBP</i>	<i>CDM.VITAL</i>	<i>Most recent record within clinical significance</i>
	<i>DBP</i>	<i>CDM.VITAL</i>	<i>Most recent record within clinical significance</i>
	<i>BMI</i>	<i>CDM.VITAL</i>	<i>Most recent record of VITAL.ORIGINAL_BMI within clinical significance. If VITAL.ORIGINAL_BMI is not available, BMI will be calculated based on VITAL.HT and VITAL.WT.</i>
	<i>Insurance carrier</i>	<i>CDM.ENCOUNTER</i>	<i>Most recent record from ENCOUNTER data PAYER_TYPE_PRIMARY Categorical (Code None-Self Pay Commercial Government-Medicare Government-Medicaid No information/Unknown/Other/missing)</i>
	<i>PCSK9i prescribing over time</i>	<i>CDM.PRESCRIBING</i>	<i>For the population of interest collect number of individuals with a prescribing record each quarter January 01, 2015-March 31, 2019</i>
<i>10-year ASCVD risk score January 01, 2015- March 31, 2019</i>	<i>10-year ASCVD risk score</i>		<i>Categorical (<5% 5-7.5% 7.5-10% 10-20% ≥20%) Appendix B</i>
	<i>Sex</i>	<i>CDM.DEMOGRAPHIC</i>	<i>M/F</i>
	<i>Age</i>	<i>CDM.DEMOGRAPHIC</i>	<i>Years (20-79)</i>
	<i>Race/Ethnicity</i>	<i>CDM.DEMOGRAPHIC</i>	<i>African American White Hispanic- classify as White or African American first, if individuals that are Hispanic but not classified as White or African American run with White parameters, Appendix C</i>
	<i>SBP</i>	<i>CDM.VITAL</i>	<i>Most recent record within clinical significance</i>

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	<i>Treatment of High Blood Pressure</i>	<i>CDM.PRESCRIBING</i>	<i>No record of Non-Lipid Lowering Cardiovascular Medications January 01, 2015-March 31,2019 ACE inhibitor ARB CCB Beta Blocker Thiazide diuretics Aldosterone antagonists</i>
	<i>Diabetes</i>	<i>CDM.DIAGNOSIS</i>	<i>Y/N</i>

* CDM data availability may vary between DataMarts and also within a DataMart based on the specific cohort and concepts. For this reason, Prep-to-Research queries are highly advisable.

4. Medication Code list Detail

	Yes	No	Depends on drug (specify below)
Should combination medications be included? (e.g., Lisinopril/metformin)	X		
Does the dose of the drug matter?		X	Statins (PRESCRIBING.RX_DOSE_ORDERED)
Does the brand of the drug matter?		X	
Does the delivery method (e.g. pill, injection, topical application) of the drug matter?	X		
Can the same generic drug be included in more than one medication concept (e.g. xxx is both an yyy and a zzzz)?	X		
Are there any other inclusion or exclusion criteria to consider when develop the code lists for these medication concepts (please write in)?			

5. Query Output Variables -Appendix A:Proposal table

Output Table	Description	Variables
<i>Patient_Characteristics</i>	<i>Flow chart of patients</i>	<i>Description (CDM.DEMOGRAPHIC; Have DOB; sex Male/Female;18-110, Diabetes or prior cardiovascular event January 01, 2015-March 31, 2019; Have not died within a year of Diabetes or prior cardiovascular event; LDL-C>=70; Statin; PCSK9i PRESCRIBING record between January 01, 2015-March 31, 2019 following diagnosis of Diabetes or prior cardiovascular event)</i>

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EHR_DEMO	Number of patients per Demographic category	Patient_Characteristic (Age; Male; BMI; Race; Ethnicity; Primary_Insurance_Type) DEMOGRAPHIC.BIRTH_DATE DEMOGRAPHIC.SEX DEMOGRAPHIC.RACE DEMOGRAPHIC.HISPANIC ENCOUNTER.PAYER_TYPE_PRIMARY
EHR_CONDITION	Number of patients with Comorbid conditions	Condition (Obesity; Hypertension; Chronic kidney disease; PVD; MI; Ischemic stroke; Hemorrhagic stroke; TIA; Diabetes) DIAGNOSIS.DX DIAGNOSIS.DX_TYPE DIAGNOSIS.ADMIT_DATE DIAGNOSIS.ENC_TYPE
EHR_Cardio_Risk_Factors	Mean values for patients with Cardiovascular Risk Factors	Factor (Current_smoker; SBP; DBP; LDL; HDL; TG) LAB_RESULTS_CM.LAB_LOINC LAB_RESULTS_CM.RESULT_NUM LAB_RESULTS_CM.RESULT_DATE VITAL.MEASURE_DATE VITAL.SBP VITAL.DBP VITAL.SMOKING VITAL.TOBACCO VITAL.TOBACCO_TYPE
EHR_ASCVD	Number of patients per stratification of 10-year ASCVD Risk Score	Risk_Score (<5%; 5-7.5%; 7.5-10%; 10-20 %;> =20%) DEMOGRAPHIC.BIRTH_DATE DEMOGRAPHIC.SEX DEMOGRAPHIC.RACE DEMOGRAPHIC.HISPANIC DIAGNOSIS.DX DIAGNOSIS.DX_TYPE DIAGNOSIS.ADMIT_DATE LAB_RESULTS_CM.LAB_LOINC LAB_RESULTS_CM.RESULT_NUM LAB_RESULTS_CM.RESULT_DATE VITAL.SMOKING VITAL.TOBACCO VITAL.TOBACCO_TYPE VITAL.MEASURE_DATE VITAL.SBP PRESCRIBING.RXNOM_CUI PRESCRIBING.RX_START_DATE (PRESCRIBING.ORDER_DATE)
ASCVD_demo	Counts of patients for ASCVD risk score (Only M/F sex, age 20-79, White, African American or Hispanic)	Category (Age, Male, Race, Ethnicity) DEMOGRAPHIC.BIRTH_DATE DEMOGRAPHIC.SEX DEMOGRAPHIC.RACE DEMOGRAPHIC.HISPANIC

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<i>EHR_MEDS</i>	<i>Number of patients with a PRESCRIBING record per class</i> <i>Non-Lipid Lowering Cardiovascular Medications, Statins, Non-Statins Therapies, and PCSK9i medications</i>	<i>Medication_Class</i> <i>PRESCRIBING.RXNOM_CUI</i> <i>PRESCRIBING.RX_START_DATE (PRESCRIBING.ORDER_DATE)</i>
<i>EHR_MEDS_TIME</i>	<i>Number of patients with a PRESCRIBING record per quarter</i> <i>PCSK9i medications</i>	<i>Medication_Class</i> <i>Quarter (2015_01;2015_02;2015_03;2015_04; 2016_01;2016_02;2016_03;2016_04; 2017_01;2017_02;2017_03;2017_04; 2018_01;2018_02;2018_03;2018_04; 2019_01;2019_02)</i> <i>PRESCRIBING.RXNOM_CUI</i> <i>PRESCRIBING.RX_START_DATE (PRESCRIBING.ORDER_DATE)</i>

Appendix A: Proposal Table

Table - Patient Demographics, Comorbidities, Cardiovascular Risk Factors, and Cardiovascular Medications Patient Characteristics

	Prescribed PCSK9-i (N=nnnn)	Not Prescribed PCSK9-i (N=nnnn)	Total (N=nnnn)
Demographics			
Age (years), mean (SD)			
Male sex, n (%)			
BMI (kg/m ²), mean (SD)			
Race, n (%)			
American Indian/Alaska Native			
Asian			
Native Hawaiian or Other Pacific Islander			
Black or African American			
White			
Other/unknown			
Ethnicity, n (%)			
Hispanic or Latino			
Not Hispanic or Latino			
Other/unknown			
Concomitant Condition*			
Obesity			
Hypertension			
Chronic kidney disease			
PVD			
MI			
Ischemic stroke			
Hemorrhagic stroke			
TIA			
Diabetes			
Cardiovascular Risk Factors			
Current smoker, n (%)			
SBP (mmHg), mean (SD)			
DBP (mmHg), mean (SD)			

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LDL-C (mg/dl), mean (SD)

HDL-C (mg/dl), mean (SD)

TG (mg/dl), mean (SD)

10-year ASCVD Risk Score

ASCVD risk est. %

<5%

5-7.5%

7.5-10%

10-20%

≥20%

Non-Lipid Lowering Cardiovascular Medications

ACE inhibitor

ARB

CCB

Beta blocker

Thiazide diuretics

Aldosterone antagonists

Lipid lowering prescription

Statins, n (%)

Lovastatin

Simvastatin

Atorvastatin

Pravastatin

Rosuvastatin

Pitavastatin*

Fluvastatin*

Non-Statins Therapies, n (%)

Ezetimibe*

Fenofibric acid*

Colesevelam*

Cholestyramine

Colestipol*

PCSK9 Inhibitors, n (%)

Any PCSK9 inhibitor, n (%)

Evolocumab*

Alirocumab*

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Appendix B: 10-year ASCVD Risk Score

Muntner P, Colantonio LD, Cushman M, Goff DC, Jr., Howard G, Howard VJ, Kissela B, Levitan EB, Lloyd-Jones DM, Safford MM. Validation of the atherosclerotic cardiovascular disease Pooled Cohort risk equations. *JAMA*. 2014;311:1406-1415.

Supplemental Table 1. Estimation of race- and gender-specific ASCVD risk using the ASCVD Pooled Cohort risk equations.¹

	S ₀ (t) at 5 years†	S ₀ (t) at 10 years	Mean score	Equations parameters*
				Individual score
<i>Participants not taking antihypertensive medications</i>				
Black women	0.98194	0.9533	86.61	= 17.114 × ln(age) + 0.94 × ln(TC) - 18.92 × ln(HDL-C) + 4.475 × ln(age) × ln(HDL-C) + 27.82 × ln(SBP) - 6.087 × ln(age) × ln(SBP) (+ 0.691 if current smoker) (+ 0.874 if diabetes)
White women	0.98898	0.9665	-29.18	= - 29.799 × ln(age) + 4.884 × ln(age) ² + 13.54 × ln(TC) - 3.114 × ln(age) × ln(TC) -13.578 × ln(HDL-C) + 3.149 × ln(age) × ln(HDL-C) + 1.957 × ln(SBP) (+ 7.574 - 1.665 × ln(age) if current smoker) (+ 0.661 if diabetes)
Black men	0.95726	0.8954	19.54	= 2.469 × ln(age) + 0.302 × ln(TC) - 0.307 × ln(HDL-C) + 1.809 × ln(SBP) (+ 0.549 if current smoker) (+ 0.645 if diabetes)
White men	0.96254	0.9144	61.18	= 12.344 × ln(age) + 11.853 × ln(TC) - 2.664 × ln(age) × ln(TC) - 7.99 × ln(HDL-C) + 1.769 × ln(age) × ln(HDL-C) + 1.764 × ln(SBP) (+ 7.837 - 1.795 × ln(age) if current smoker) (+ 0.658 if diabetes)
<i>Participants taking antihypertensive medications</i>				
Black women	0.98194	0.9533	86.61	= 17.114 × ln(age) + 0.94 × ln(TC) - 18.92 × ln(HDL-C) + 4.475 × ln(age) × ln(HDL-C) + 29.291 × ln(SBP) - 6.432 × ln(age) × ln(SBP) (+ 0.691 if current smoker) (+ 0.874 if diabetes)
White women	0.98898	0.9665	-29.18	= - 29.799 × ln(age) + 4.884 × ln(age) ² + 13.54 × ln(TC) - 3.114 × ln(age) × ln(TC) -13.578 × ln(HDL-C) + 3.149 × ln(age) × ln(HDL-C) + 2.019 × ln(SBP) (+ 7.574 - 1.665 × ln(age) if current smoker) (+ 0.661 if diabetes)
Black men	0.95726	0.8954	19.54	= 2.469 × ln(age) + 0.302 × ln(TC) - 0.307 × ln(HDL-C) + 1.916 × ln(SBP) (+ 0.549 if current smoker) (+ 0.645 if diabetes)
White men	0.96254	0.9144	61.18	= 12.344 × ln(age) + 11.853 × ln(TC) - 2.664 × ln(age) × ln(TC) - 7.99 × ln(HDL-C) + 1.769 × ln(age) × ln(HDL-C) + 1.797 × ln(SBP) (+ 7.837 - 1.795 × ln(age) if current smoker) (+ 0.658 if diabetes)

ASCVD: atherosclerotic cardiovascular disease; HDL-C: high-density lipoprotein cholesterol; REGARDS: REasons for Geographic And Racial Differences in Stroke; SBP: systolic blood pressure; TC: total cholesterol.

* Final risk estimation is calculated as:

$$\text{Predicted ASCVD risk} = 1 - S_0(t)^{e^{(\text{Individual score} - \text{Mean score})}}$$

† Obtained from the ACC/AHA Guideline on the Assessment of Cardiovascular Risk working group (S. Coady, Personal Communication).

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Appendix C: References

1. Qureshi WT, Kaplan RC, Swett K, Burke G, Daviglius M, Jung M, Talavera GA, Chirinos DA, Reina SA, Davis S, Rodriguez CJ. American College of Cardiology/American Heart Association (ACC/AHA) Class I Guidelines for the Treatment of Cholesterol to Reduce Atherosclerotic Cardiovascular Risk: Implications for US Hispanics/Latinos Based on Findings From the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *J Am Heart Assoc.* 2017;6:e005045.

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