

Refer to the Appendix for specific variable names.

A. Disease category (F102 and F102C) and final group classification (F700 and F701), F100

1. The disease categories variables reported for PH and comparators on the two forms were combined. For example:
 Systemic lupus erythematosus (Lupus) (SLE) is defined as “Yes” if F102, Q12d1 = 1 or F102C, Q4d1 = 1
2. PH prevalent status is defined based on F102, Q11d
3. Age at diagnosis is calculated based on F100, Q9 and F102, Q11d
4. Years on PH at time of enrollment is defined based on F100, Q3 and F102, Q11d
5. Final classifications: PVD and group classifications (primary as well as secondary and tertiary, where applicable) are defined based on PI group classification on F102 and Adjudication Committee classification on F700 / F701 where applicable

B. Demographics and basic clinical characteristics (F100, LPVD F500, F132, F280, F270)

1. Ethnicity – F100, Q7 or – if reported as “unk” in the parent study, but available in LPVD - LPVD F500, Q4
2. Race – F100, Q8 or – if reported as “unk” in the parent study, but available in LPVD - LPVD F500, Q5
 Two additional variables for race are provided: 3-category variable (black, white, other) and 2-category variable (black, other)
3. Age at enrollment – calculated based on F100, Q3 and Q9
4. Anthropometric measurements: weight, height, BMI, BSA.
 Derived weight and Derived height are defined as follows:
 - As reported – F132, Q4;
 - If F132 not available – average of height and weight (if both available) from F280, Q11, Q12 and F270, Q6, Q7,
 - If one of F280 / F270 not available – height / weight from the one available
 BMI = Derived Weight / (Derived Height sqrd)
 BSA = sqrt ((Derived Height * Derived Weight)/3600)

C. Non-PVD Comorbidity, Medical and Surgical History (F103)

1. History of coronary disease (MI or coronary artery bypass) = Q6 = 1 or Q7 = 1

D. Exposure History (F105)

1. History of smoking = Q12 = 1 or 2

E. PH medications (F110)

Medication were categorized by the study investigators

Category (variable name)	Medications included
PH Medications (PH_MED)	On any of the PH Medications below
PH Meds: Endothelin receptor antagonists (ERAs) (PH_ERA)	'AMBRISANTAN', 'BOSENTAN', 'LETAIRIS', 'MACITENTAN', 'OPSUMIT', 'PULMONEXT', 'STAYVEER', 'TRACLEER', 'VOLIBRIS'
PH Med: PDE5i (PH_PDE5I)	'ADCIRCA', 'CIALIS', 'CIDALA', 'SILDENAFIL', 'SILDENAFIL CITRATE',

Category (variable name)	Medications included
	'TADAFIL', 'TADALAFIL', 'REVATIO', 'VIAGRA'
PH Med: Soluble guanylate cyclase stimulator (PH_SGC)	'ADEMPAS', 'RIOCIGUAT'
PH Meds: Prostanoids (PH_PROST)	'EPOPROSTENOL', 'EPOPROSTENOL SODIUM', 'FOLAN', 'ILOPROST', 'ORENITRAM', 'REMODULIN', 'SELEXIPAG', 'TREPROSTINIL', 'TREPROSTINIL DIOLAMIN', 'TREPROSTINIL SODIUM', 'TYVASO', 'UPTRAVI', 'VENTAVIS', 'VELETRI'
Calcium Channel Blockers On CCB meds for PH (PH_CCB) (same medications are included in the category "On CCB meds not for PH", investigators provided participant specific information on reason why CCB is taken)	'ADALAT', 'ADALAT CC', 'AFEDITAB', 'AMLODIPINE', 'AMLODIPINE BESILATE', 'AMLODIPINE BESYLATE', 'BEPRIDIL', 'CARDIZEM', 'CARDIZEM CD', 'CARTIA XT', 'CALAN', 'CALAN SR', 'CARDENE', 'COVERA', 'DILTIAZEM', 'DILTIAZEM CD', 'DILTIAZEM HCL', 'DILACOR', 'DYNACIRC', 'DILT-XR', 'FELODIPINE', 'ISOPTIN', 'ISRADIPINE', 'NIFEDICAL XL', 'NIFEDIPINE', 'NIFEDIPINE ER', 'NIFEDIPINE XL', 'NISOLDIPINE', 'NORVASC', 'NICARDIPINE HCL', 'NIMODIPINE', 'NIMOTOP', 'PLENDIL', 'PROCARDIA', 'PROCARDIA XL', 'SULAR', 'TIAZAC', 'VASCOR', 'VERAPAMIL HCL', 'VERAPAMIL'
Cardiac Medications (CARDIAC_MED)	On any of the Cardiac Medications below
On Aspirin (ASPRIN)	'ACETASALICYLIC ACID', 'ASPIRIN', 'ASCRIPITIN', 'AGGRENOX', 'ASA', 'ASPIRIN', 'ASPIRIN (E.C.)', 'ASPIRIN 81', 'ASPIRIN ENTERIC COATED K.P.', 'ASPRIN', 'BABY ASPIRIN', 'BUFFERIN', 'ECOTRIN', 'EXCEDRIN'
On P2Y12 inhibitors (P2Y12_INHIBITORS)	'BRILINTA', 'CLOPIDOGREL', 'EFFIENT', 'PLAVIX', 'PRASUGREL', 'TICAGRELOR', 'TICLID', 'TICLOPIDINE'
On anticoagulants - DOACS (ANTICOAGULANTS_DOACS)	'APIXABAN', 'DABIGATRAN', 'EDOXABAN', 'ELIQUIS', 'PRADAXA', 'RIVAROXABAN', 'SAVAYSA', 'XARELTO'
On other anticoagulants (ANTICOAGULANTS_OTHER)	'ARIXTRA', 'COUMADIN', 'DALTEPARIN SODIUM', 'ENOXAPARIN', 'FONDAPARINUX', 'FRAGMIN', 'HEPARIN SODIUM', 'HEPARIN', 'LOVENOX',

Category (variable name)	Medications included
	'WARFARIN'
On other HTN (ANTIHYPERTENSIVES_OTHER)	'ALDOMET', 'CARDURA', 'CATAPRES', 'CLONIDINE HCL', 'DIBENZYLIN', 'DIXARIT', 'DOXAZOSIN MESYLATE', 'HYDRALAZINE', 'HYDRALAZINE HCL', 'HYTRIN', 'METHYDOPA', 'MINIPRESS', 'MINOXIDIL', 'MINOXIDIL', 'PHENOXYGENZAMINE HCL', 'PHENTOLAMINE MESYLATE', 'PRAZOSIN HCL', 'REGITINE', 'TERAZOSIN HCL'
On Beta Blockers (BETA_BLOCKERS)	'ACEBUTOLOL HCL', 'ATENOLOL', 'BETAXOLOL', 'BISOPROLOL', 'BLOCADREN', 'BYSYSTOLIC', 'CARVEDILOL', 'COREG', 'COREG CR', 'CORCARD', 'INDERAL', 'KERLONE', 'LABETALOL HCL', 'LOPRESSOR', 'MADOLOL', 'METOPROLOL SUCCINATE', 'METOPROLOL TARTRATE', 'METOPROLOL', 'METOPROLOL XL SANDOZ', 'NEBIVOLOL', 'NORMODYNE', 'PINDOLOL', 'PROPANOLOL', 'PROPRANOLOL HCL', 'SECTRAL', 'SOTALOL', 'TENORMIN', 'TIMOLOL MALEATE', 'TOPROL XL', 'TRANDATE', 'VISKEN', 'ZEBETA'
CCB	Defined above
On digoxin (DIGOXEN)	'DIGOXEN', 'DIGOXIN', 'LANOXIN'
On diuretics (DIURETICS)	'ACETAZOLAMIDE', 'ALDACTAZIDE', 'AMILORIDE AND HYDROCHLOROTHIAZIDE', 'AMILORIDE', 'BUMETANIDE', 'BUMEX', 'CHLOROTHIAZIDE', 'CHLORTHALIDONE', 'DEMADEX', 'DIAMOX', 'DIURIL', 'DORZOLAMIDE', 'DYAZIDE', 'DYRENIUM', 'EDECIN', 'ESIDRIX', 'ETHACRYNIC ACID', 'FEBUXOSTAT', 'FUROSEMIDE', 'HCTZ', 'HYDROCHLOROTHIAZID', 'HYDROCHLOROTHIAZIDE W/LISINAPRIL', 'HYDROCHLOROTHIAZIDE W/LOSARTAN', 'HYDROCHLOROTHIAZIDE W/SPIRONOLACTONE', 'HYDROCHLOROTHIAZIDE W/TRIAMTERENE', 'HYDROCHLOROTHIAZIDE', 'HYDRODIURIL', 'HYGROTON', 'INDAPAMIDE', 'LASIX', 'LISINAPRIL HCTZ', 'LOZOL', 'MAXZIDE', 'METHAZOLAMIDE', 'METOLAZONE', 'MICROZIDE', 'MIDAMOR', 'MYKROX', 'ORETIC', 'PROBENECID', 'TORSEMIDE', 'TRIAMETERENE + HYDROCHLOROTHIAZIDE', 'TRIAMTEREEN/HYDROCHLOORTHIAZIDE', 'TRIAMTERENE AND HYDROCHLOROTHIAZIDE', 'TRIAMTERENE', 'VALSARTAN AND HYDROCHLOROTHIAZIDE', 'ZAROXOLYN'
On Aldosterone (ALDOSTERONE)	'ALDACTONE', 'EPLERENONE', 'HYDROCHLOROTHIAZIDE W/SPIRONOLACTONE', 'INSPIRA',

Category (variable name)	Medications included
	'SPIRONOLACTONE', 'SPIRONOLACTONE+HYDROCHLOROTHIAZIDE', 'SPIROLACTON', 'SPIRONOLACTON', 'SPIRONOLACTONE', 'SPIRONOLACTONE AND HYDROCHLOROTHIAZIDE'
On statins (STATINS)	'ATORVASTATIN CALCIUM', 'CRESTOR', 'FLUVASTATIN SODIUM', 'LESCOL', 'LIPITOR', 'LIVALO', 'LOVASTATIN', 'MEVACOR', 'PITAVASTATIN', 'PRAVACHOL', 'PRAVASTATIN SODIUM', 'ROSUVASTATIN', 'SIMVASTATIN', 'ZOCOR'
On fibrates (FIBRATES)	'FENOFIBRATE', 'GEMFIBROZIL', 'LOPID', 'TRICOR'
On bile acid sequestrants (BILE_ACID_SEQUESTRANTS)	'CHOLESTYRAMINE', 'COLESEVELAM HCL', 'COLESTID', 'COLESTIPOL HCL', 'QUESTRAN', 'WELCHOL'
On other cholesterol lowering meds (OTHER_CHOLESTEROL_LOWERING_MEDS)	'EZETIMIBE', 'EZETIMIBE/SIMVASTATIN', 'VYTORIN', 'ZETIA'
On nitrates (NITRATES)	'DEPONIT', 'DILATRATE-SR', 'IMDUR', 'ISMO', 'ISORDIL', 'ISOSORBIDE DINITRATE', 'ISOSORBIDE MONONITRATE', 'ISOSORBIDE', 'MINITRAN', 'MONOKET', 'NITRO-BIDNITROL', 'NITRO-DUR', 'NITROGARD', 'NITROGLYCERIN', 'NITROGLYCERIN PATCHES', 'NITROGLYCERIN SUBLINGUAL', 'NITROGLYCERIN OINTMENT', 'NITROLINGUAL', 'NITRONG', 'NITROSTAT', 'SORBITRATE', 'TRANSDERM-NITRO'
On other antianginal meds (OTHER_ANTIANGINAL)	'RANOLAZINE', 'RENEXA'
Angiotensin-converting enzyme inhibitors (ACEI)	'ALTACE', 'AMLODIPINE BENAZEPRIL', 'ACCUPRIL', 'BENAZEPRIL', 'CAPTOPRIL', 'CAPOTEN', 'ENALAPRIL', 'ENALAPRIL MALEATE', 'HYDROCHLOROTHIAZIDE W/LISINOPRIL', 'LISINOPRIL', 'LISINOPRIL HCTZ', 'LOTENSIN', 'PRINIVIL', 'QUINAPRIL', 'RAMIPRIL', 'VASOTEC', 'ZESTRIL'
Angiotensin Receptor Blockers (ARBs) (ARB)	'AMLODIPINE AND VALSARTAN', 'AMLODIPINE BESYLATE AND VALSARTAN', 'AZILSARTAN MEDOXOMIL', 'ATACAND', 'AVAPRO', 'BENICAR', 'CANDESARTAN', 'CANDESARTAN CILEXETIL', 'COZAAR', 'DIOVAN', 'EPROSARTAN MESYLATE', 'HYDROCHLOROTHIAZIDE W/LOSARTAN', 'IRBESARTAN', 'LOSARTAN', 'LOSARTAN / HYDROCHLOROTHIAZID STADA', 'LOSARTAN + HIDROCLOROTIAZIDA', 'LOSARTAN HCTZ', 'LOSARTAN POTASSIUM', 'MICARDIS',

Category (variable name)	Medications included
	'OLMESARTAN', 'SACUBITRIL W/VALSARTAN', 'TELMISARTAN', 'TEVETEN', 'VALSARTAN', 'VALSARTAN AND HYDROCHLOROTHIAZIDE'
On angiotensin receptor neprilysin inhibitor (ARNI) (ARNI)	'ENTRESTO', 'SACUBITRIL/VALSARTAN'
On Antiarrhythmic (ANTIARRHYTHMICS)	'AMIODARONE', 'AMIODARONE HCL', 'ATENOLOL', 'ATROPINE W/DIPHENOXYLATE', 'BETAPACE', 'CORDARONE', 'DISOPYRAMIDE PHOSPHATE', 'DOFETILIDE', 'DIGOXEN', 'DIGOXIN', 'DIPHENOXYLATE HCL & ATROPINE SULFATE', 'DIPHENOXYLATE/ATROPINE', 'DORZOLAMIDE HCL TIMOLOL MALEATE', 'DORZOLAMIDE TIMOLOL', 'DRONEDARONE', 'EPINEPHRINE', 'FLECAINIDE', 'LANOXIN', 'LIDOCAINE', 'MEXILETINE HCL', 'MEXITIL', 'MEXILETINE', 'NORPACE', 'NADOLOL', 'NEOMYCIN', 'PROCAINAMIDE', 'PROCAN', 'PRONESTYL', 'PROPAFENONE HCL', 'PROPAFENONE', 'QUINADINE GLYCOMATE', 'QUINAGLUTE', 'RHYTHMOL', 'RHYTHMOL SR', 'SOTALOL', 'TAMBOCOR', 'TIKOSYN', 'TOCAINIDE HCL', 'TONOCARD', 'VERAPAMIL', 'VERAPAMIL HCL'
Calcium Channel Blockers On CCB meds not for PH (CCB) (same medications are included in the category "On CCB meds for PH", investigators provided participant specific information on reason why CCB is taken)	'ADALAT', 'ADALAT CC', 'AFEDITAB', 'AMLODIPINE', 'AMLODIPINE BESILATE', 'AMLODIPINE BESYLATE', 'BEPRIDIL', 'CARDIZEM', 'CARDIZEM CD', 'CARTIA XT', 'CALAN', 'CALAN SR', 'CARDENE', 'COVERA', 'DILTIAZEM', 'DILTIAZEM CD', 'DILTIAZEM HCL', 'DILACOR', 'DYNACIRC', 'DILT-XR', 'FELODIPINE', 'ISOPTIN', 'ISRADIPINE', 'NIFEDICAL XL', 'NIFEDIPINE', 'NIFEDIPINE ER', 'NIFEDIPINE XL', 'NISOLDIPINE', 'NORVASC', 'NICARDIPINE HCL', 'NIMODIPINE', 'NIMOTOP', 'PLENDIL', 'PROCARDIA', 'PROCARDIA XL', 'SULAR', 'TIAZAC', 'VASCOR', 'VERAPAMIL HCL', 'VERAPAMIL'

F. Functional Class (F115)

Functional class defined based on Q5, Q6 or Q7.

Functional class was collected retrospectively based on medical records and study investigator notes. The WHO Functional Classification (Q5) was the standard, but the specific classification was not always clearly documented. If only NYHA class (Q6) was available and the classification '3B' was assigned in the medical records/notes, the Steering Committee agreed to report this as Class 3.

G. SF36v2 (F170)

SF36 scores provided:

1. Physical Functioning
2. Role Limitations Due To Physical Health Problems

3. Bodily Pain
4. General Health
5. Vitality
6. Social Functioning
7. Role Limitations Due To Emotional Problems
8. Mental Health
9. Physical Component Summary Score
10. Mental Component Summary Score

Maruish ME. (Ed.). *User's manual for the SF-36v2 Health Survey (3rd ed.)*. Lincoln, RI: QualityMetric Incorporated, 2011.

H. Minnesota Living With Heart Failure® Questionnaire (MLHF) (F171)

MLHF scores provided:

1. MHLF Total Score
2. MHLF Physical Domain
3. MHLF Emotional Domain

Rector TS, Kubo SH, Cohn JN. 1987. *Patients' Self-Assessment of Their Congestive Heart Failure: Content, Reliability and Validity of a New Measure, the Minnesota Living With Heart Failure Questionnaire*. *Heart Failure* 3: 198-209.

I. emPHasis-10 Quality of Life (F172)

1. EmPHasis-10 Score provided

Yorke, J., P. Corris, S. Gaine, J. S. Gibbs, D. G. Kiely, C. Harries, V. Pollock, and I. Armstrong. 2014. *emPHasis-10: development of a health-related quality of life measure in pulmonary hypertension*. *Eur Respir J* 43: 1106-1113

J. RHC (283): Only Core adjudicated data included:

1. Cardiac output (CO) (use TDCO average; if no TDCO then use Fick)
 - Resting = average of Q39a-c or, if no TDCO, Q40b
 - Oxygen challenge = average of Q52a-c or, if no TDCO, Q53b
 - Vasodilation challenge = average of Q65a-c or, if no TDCO, Q66b
 - Fluid challenge = average of Q78a-c or, if no TDCO, Q79b
2. PVR
 - Resting (spontaneous) = [(Q35a-Q28a)/Derived Resting CO]
 - Resting (end-expiratory) = [(Q35b-Q28b)/Derived Resting CO]
 - Oxygen = [(Q50-Q45)/Derived Oxygen CO]
 - Vasodilation = [(Q63-Q58)/ Derived Vasodilation CO]
 - Fluid Challenge = [(Q76-Q71)/Derived Fluid CO]
3. Thermodilution Cardiac Index (calculated for rest and each challenge) :
 Cardiac index = Derived Cardiac output / Derived BSA
4. Nitric Oxide Vasodilator Response (Y/N) is defined following the algorithm provided by PVDOMICS Study Cardiac Physiology Core (all 5 conditions below need to be met. Changes [conditions 3-5] refer to differences between measures in resting phase to measures taken during the oxygen challenge [OXYGEN – RESTING]):
 - 1ST CONDITION: All with Rest PA mean (Q33a) 40 or over + Rest PCWP (Q28a) 15 or less
 - 2ND CONDITON: Oxygen challenge PA mean (Q61) drops below 40
 - 3RD CONDITON: PA mean drops by at least 10 mmHg: Q61 - Q35a >10
 - 4TH CONDITON: PCWP does not rise over 15: Q28 - Q58 <15
 - 5TH CONDITON: Derived Cardiac output does not decrease from resting phase to oxygen challenge.
5. Stroke volume: calculated as (Derived Cardiac output/Q21h)*1000 for resting RHC and the 3 challenges (Q41g, Q54g, Q67g used respectively for heart rate for the challenges)
6. Pulmonary arterial (PA) compliance: calculated as Derived Stroke volume/Derived Pulse Pressure (i.e., systolic (Q33)– diastolic (Q34) BP) for resting spontaneous and end-expiratory breathing RHC and the 3 challenges (Q48 and Q49, Q61 and Q62, Q74 and Q75 used respectively for the pulse pressure for the challenges)
7. Resistance compliance time: calculated as Derived PA compliance*0.75*0.001*80*Derived PVR for resting spontaneous and end-expiratory breathing RHC and the 3 challenges

K. ECG (F246): All data is Core adjudicated

1. ECG rhythm (F246 Q6) – 4-level categorical variable defined as follows:
 - Sinus rhythm (sinus, sinus tachycardia, and sinus bradycardia) [Q6=1 or Q6d=1 or Q6f=1]
 - Atrial fibrillation or atrial flutter [Q6a=1 or Q6b=1]
 - Paced (any) [Q6j=1 or Q6k=1 or Q6l=1]
 - Other (everything else) [Q6c, e, g, h, or l = 1]

L. Sleep (F150, F151, F153, F155, F156, Core reported data): All data is Core adjudicated

Sleep study results are calculated based on:

- Sleep studies performed following the PVDOMICS study protocol and provided by the Core (F150, F151, F153)
- Historical or clinical sleep (alternative) studies results reviewed by the Core (F155, F156)

Alternative sleep studies done within 1 year prior enrollment or 6 month after completing the study protocol were accepted provided that there was no change in nighttime oxygen or sleep disorder therapy, no more than 10% weight loss or gain, and in the opinion of the investigator, no change in patient condition that would impact results.

1. Apnea hypopnea index
2. Percentage of recording time <90% oxygen saturation
3. Oxygen desaturation index (3% and 4%)
4. Central apnea index
5. Hypopnea index
6. Obstructive apnea hypopnea index
7. Total sleep time
8. CPAP use – only available for PVDOMICS sleep studies, as reported by the Center and the participant on F150 / F151

M. Lung Physiology (F270/F271, F133): Center reported data

NOTE: PFT Data is not included in the 01/30/2023 release

Each participant has either F270, or F271. The dataset includes pulls F270 and F271 into a combined PFT dataset

1. FVC% predicted, FEV1 % predicted, FEV1/FVC% predicted, DLCO% predicted were calculated based on the Global Lung Function (GLI) 2012 equations, Macro Version 1 – April 7, 2013
Quanjer PH, Stanojevic S, Cole TJ, Baur X, Hall GL, Culver BH, Enright PL, Hankinson JL, Ip MS, Zheng J, Stocks J; ERS Global Lung Function Initiative. Multi-ethnic reference values for spirometry for the 3-95-yr age range: the global lung function 2012 equations. Eur Respir J. 2012 Dec;40(6):1324-43. doi: 10.1183/09031936.00080312. Epub 2012 Jun 27. PMID: 22743675; PMCID: PMC3786581.
2. TLC% predicted: calculated based on the 1995 ATS Workshop equations. TLC% predicted is calculated pre- and post-bronchodilator
Stocks J, Quanjer PH. Reference values for residual volume, functional residual capacity and total lung capacity. ATS Workshop on Lung Volume Measurements. Official Statement of The European Respiratory Society. Eur Respir J. 1995 Mar;8(3):492-506. doi: 10.1183/09031936.95.08030492. PMID: 7789503.
3. DLCO adjusted for Hgb using the formula below:
DLCO corrected = $DLCO * (1.7 * Hgb / (Age-Sex-Factor + Hgb))$
For females of any age and males less than 15 years old, the Age-Sex-Factor is 9.38.
For males 15 years old or older, the Age-Sex-Factor is 10.22.
DLCO adjusted for hemoglobin is converted from mL CO/min/mmHg to mol/min/kPa by multiplying by a factor of 0.3348.
Macintyre N, Crapo RO, Viegi G, Johnson DC, van der Grinten CP, Brusasco V, Burgos F, Casaburi R, Coates A, Enright P, Gustafsson P, Hankinson J, Jensen R, McKay R, Miller MR, Navajas D, Pedersen OF, Pellegrino R, Wanger J. Standardisation of the single-breath determination of carbon monoxide uptake in the lung. Eur Respir J. 2005 Oct;26(4):720-35. doi: 10.1183/09031936.05.00034905. PMID: 16204605.
4. 6MW Heart Rate Recovery at 1 min = F133, Q16b – F133, Q16a
5. 6MW Heart Rate Recovery at 2 min = F133, Q16c – F133, Q16a

N. Clinical labs DCC measurements (F220)

These lab results were measured by the Cardiac Physiology Core at the DCC from the blood specimens collected during the study sent to the Biorepository Core by the Clinical Centers. The variable names for the complete set are provided in the appendix as they are not available in the Data Dictionary for this form.

1. Positive RA factor is defined as Q15 > 20 IU/ml

O. Clinical Centers local lab measurements (F200 – F207)

NOTE: Clinical Centers local lab measurements data (except for ABG results) is not included in the 01/30/2023 release

These lab measurements were reported by the Clinical Centers based on labs done locally at the time of the study or within 45 days of enrollment date

1. Positive ANA is defined as titer \geq 1:160 or positive ANA value obtained by immunoassay – F202, Q4a and Q5a
2. eGFR is calculated based on F100, Q6, derived Black race, derived Age at enrollment, F201, Q6 using CKD eGFR formula

*Levey, A. S., Stevens, L. A., Schmid, C. H., Zhang, Y. L., Castro, A. F., 3rd, Feldman, H. I., Kusek, J. W., Eggers, P., Van Lente, F., Greene, T., Coresh, J., & CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration) (2009). A new equation to estimate glomerular filtration rate. *Annals of internal medicine*, 150(9), 604–612.
<https://doi.org/10.7326/0003-4819-150-9-200905050-00006>*

P. Chest Computerized Tomography (CT) scan measurements (F262): Core reported data

1. Main PA/Ascending aorta ratio - Q7 / Q8

Appendix

A. Disease category (F102 and F102C) and final group classification (F700 and F701), F100

VARIABLE	Label
PH_PREV	PH: Diagnosed prior enrollment
PH_AGE_DIAG	F102: Age at diagnosis (yrs)
PH_YRS	F102: Years of PH at time of enrollment
F_STATUS	Final PVD Status
F_WNOW	Final WSPH Group (mixed separately)
F_WNOWT	Final WSPH Group (primary only)
F_GROUP	Final WSPH Group (with mixed details)
F_WNOW_C	Final Comparator Group (mixed separately)
F_WNOWT_C	Final Comparator Group (primary only)
F_COMPGRP	Final Comparator Group (with mixed details)

B. Demographics and basic clinical characteristics (F100, LPVD F500, F132, F280, F270)

VARIABLE	Label
HISPANIC	Hispanic Ethnicity
RACE	Race
RACE_SH	Race (black, white, other)
BLACK	Black or African American
AGE	Age (yrs) at enrollment
WT_KG	Weight (kg)
HT_M	Height (m)
BMI	BMI (kg/m ²)
BSA	Body Surface Area (BSA) (m ²)

C. Non-PVD Comorbidity, Medical and Surgical History (F103)

VARIABLE	Label
CORONARY	F103: History of coronary disease (MI or coronary artery bypass)

D. Exposure History (F105)

VARIABLE	Label
SMOKE	F105: Current or former cigarette smoker

E. PH medications (F110)

VARIABLE	Label
ACEI	On Angiotensin-converting enzyme inhibitors (ACEi)
ANTIARRHYTHMICS	On Antiarrhythmics
ANTICOAGULANTS_DOACS	On anticoagulants - DOACS
ANTICOAGULANTS_OTHER	On other anticoagulants
ANTIHYPERTENSIVES_OTHER	On other HTN
ARB	On Angiotensin Receptor Blockers (ARBs)
ARNI	On angiotensin receptor neprilysin inhibitor (ARNI)
ASPRIN	On Aspirin
BETA_BLOCKERS	On Beta Blockers
BILE_ACID_SEQUESTRANTS	On bile acid sequestrants
CARDIAC_MED	On Cardiac Medication
DIGOXEN	On digoxin
DIURETICS	On diuretics
FIBRATES	On fibrates
NITRATES	On nitrates
OTHER_ANTIANGINAL	On other antianginal meds
OTHER_CHOLESTEROL_LOWERING_MEDS	On other cholesterol lowering meds
P2Y12_INHIBITORS	On P2Y12 inhibitors
STATINS	On statins
PH_PDE5I	PH Med: PDE5i
PH_ERA	PH Meds: Endothelin receptor antagonists (ERAs)
PH_PROST	PH Meds: Prostanoids
PH_SGC	PH Med: Soluble guanylate cyclase stimulator
PH_CCB	On CCB meds for PH
PH_MED	On PH Medication
CCB	On CCB meds not for PH
ALDOSTERONE	On aldosterone

F. Functional Class (F115)

VARIABLE	Label
FC	F115: Functional Class

G. SF36v2 (F170)

VARIABLE	Label
PF	Physical Functioning (SF36)
RP	Role Limitations Due To Physical Health Problems (SF36)
BP	Bodily Pain (SF36)
GH	General Health (SF36)
VT	Vitality (SF36)
SF	Social Functioning (SF36)
RE	Role Limitations Due To Emotional Problems (SF36)
MH	Mental Health (SF36)
PCS	Physical Component Summary Score (SF36)
MCS	Mental Component Summary Score (SF36)

H. Minnesota Living With Heart Failure® Questionnaire (MLHF) (F171)

MLHF	F171: MHLF Total Score
MLHF_PHYS	F171: MHLF Physical Domain
MLHF_EMOT	F171: MHLF Emotional Domain

I. emPHasis-10 Quality of Life (F172)

VARIABLE	Label
EMPHASIS	F172: EmPHasis-10 Score

J. RHC (F280, F283): Only Core adjudicated data included:

VARIABLE	Label
CARD_OUTPUT	RHC: Rest: Cardiac Output
OC_CARD_OUTPUT	RHC: O2: Cardiac Output
VC_CARD_OUTPUT	RHC: iNO: Cardiac Output
FC_CARD_OUTPUT	RHC: Fluid: Cardiac Output
PVR_SPONT	RHC: Rest: PVR (Spontaneous Breathing) (Wood units)
PVR_EXPIR	RHC: Rest: PVR (End-expiratory Hold) (Wood units)
OC_PVR	RHC: O2: PVR (Wood units)
VC_PVR	RHC: iNO: PVR (Wood units)

VARIABLE	Label
FC_PVR	RHC: Fluid: PVR (Wood units)
CARD_INDEX	RHC: Rest: Cardiac Index (TDCI) (L/min/m ²)
OC_CARD_INDEX	RHC: O2: Thermodilution Cardiac Index (TDCI) (L/min/m ²)
VC_CARD_INDEX	RHC: iNO: Thermodilution Cardiac Index (TDCI) (L/min/m ²)
FC_CARD_INDEX	RHC: Fluid: Thermodilution Cardiac Index (TDCI) (L/min/m ²)
POS_S_YN	Nitric Oxide Vasodilator Response
STROKE_VOL	RHC: Rest: Stroke volume (mL/beat)
OC_STROKE_VOL	RHC: OC: Stroke volume (mL/beat)
VC_STROKE_VOL	RHC: VC: Stroke volume (mL/beat)
FC_STROKE_VOL	RHC: FC: Stroke volume (mL/beat)
PA_COMPLIANCE_SPONT	RHC: Rest: PA compliance (dV/dP) (Spontaneous Breathing)
PA_COMPLIANCE_EXPIR	RHC: Rest: PA compliance (dV/dP) (End-Expiratory Hold)
OC_PA_COMPLIANCE	RHC: OC: PA compliance (dV/dP)
VC_PA_COMPLIANCE	RHC: VC: PA compliance (dV/dP)
FC_PA_COMPLIANCE	RHC: FC: PA compliance (dV/dP)
RC_TIME_SPONT	RHC: Rest: Resistance compliance (RC) time(s) (Spontaneous Breathing)
RC_TIME_EXPIR	RHC: Rest: Resistance compliance (RC) time(s) (End-Expiratory Hold)
OC_RC_TIME	RHC: OC: Resistance compliance (RC) time(s)
VC_RC_TIME	RHC: VC: Resistance compliance (RC) time(s)
FC_RC_TIME	RHC: FC: Resistance compliance (RC) time(s)

K. ECG (F246): All data is Core adjudicated

VARIABLE	Label
ECG_RHYTHM	ECG: Rhythm

L. Sleep (F150, F151, F153, F155, F156, Core reported data): All data is Core adjudicated

VARIABLE	Label
AHI_C	Sleep: Apnea hypopnea index (AHI)
PCTLT90_C	Sleep: Percentage of recording time <90% O ₂ saturation
ODI3P	Sleep: Oxygen Desaturation Index 3% (ODI) (events/hour)
ODI4P	Sleep: Oxygen Desaturation Index 4% (ODI) (events/hour)
CAI_C	Sleep: Central apnea index
HI_C	Sleep study: Hypopnea index

VARIABLE	Label
OAHI_C	Sleep: Obstructive Apnea Hypopnea Index (OAHI)
TOT_SLEEP_TM	Sleep study: Total sleep time (min)
CPAP_USED	Sleep study: Used PAP device

M. Lung Physiology (F270/F271, F133): Center reported data

VARIABLE	Label
FVC_PERCENT_PREDICTED	PFT: FVC% predicted
FEV1_PERCENT_PREDICTED	PFT: FEV1 % predicted
DLCO_PERCENT_PREDICTED	PFT: DLCO % predicted
FEV1FVC_PERCENT_PREDICTED	PFT: FEV1/FVC% predicted
PRE_TLC_PERC_PRED	PF: Pre BD: TLC (% predicted)
POST_TLC_PERC_PRED	PFT: Post BD: TLC (% predicted)
DLCO_TBL_HGB	PFT: DLCO adjusted for HgB (mlCO/min/mmHg)
HRR_1MIN	F133: Heart rate (HR) recovery at 1 min (HR end - HR 1 min) (beats/min)
HRR_2MIN	F133: Heart rate (HR) recovery at 2 min (HR end - HR 2 min) (beats/min)

N. Clinical labs DCC measurements (F220)

VARIABLE	Label
URINE_NITRITE	F220: Urine Nitrite
URINE_CREATN	F220: Urine Creatinine (umol/l)
URINE_NITRATEN	F220: Ave Urine Nitrate (uM)
URINE_NI_CREATN	F220: Urine Nitrate/Creatinine (umol/umol)
ADRENERGICN	F220: b-adrenergic Receptor Density(MESF)
MITOSOX	F220: Cell Biomics: Mitochondrial potential (red)
MITOTRACKERN	F220: MitoTracker Green-Median Fluresence Intensity - Background Adjusted
TMREN	F220: Cell Biomics: Mitochondrial ROS (TMRE)
MESF	F220: Cell Biomics: b-adrenergic receptor (MESFx10)
MITOTR	F220: Cell Biomics: Mitochondrial mass (green) x 10
FERRITINN	F220: Clinical Labs: FERRITIN (ng/ml)
GLUCOSEN	F220: Clinical Labs: Glucose (mg/dl)
HDLN	F220: Clinical Labs: HDL (mg/dl)
HSCRPN	F220: Clinical Labs: hsCRP (mg/L)
INSULINN	F220: Clinical Labs: INSULIN (uU/ml)

VARIABLE	Label
IRONN	F220: Clinical Labs: Iron (ug/dl)
LDLCN	F220: Clinical Labs: LDLc
MPON	F220: Clinical Labs: MPO (pmol/L)
PRO_BNPN	F220: Clinical Labs: PRO-BNP (pg/ml)
RHEMATOIDN	F220: Clinical Labs: Rheumatoid Factor (IU/ml)
TOTAL_CHOLN	F220: Clinical Labs: Total Cholesterol (mg/dl)
TRANSFERRINN	F220: Clinical Labs: Transferrin (mg/dl)
TRIGLYCERIDEN	F220: Clinical Labs: Triglyceride (mg/dl)
TROP_TN	F220: Clinical Labs: TROP T (ng/ml)
RHEMATOIDNCAT	F220: Clinical Labs: Positive Rheumatoid Factor
TROP_TNCAT	F220: Clinical Labs: Positive TROP T
HOMOCYST_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: HOMOCYSTEINE (umol/l)
GLUTATH_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: GLUTATHIONE (umol/l)
CYST_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: CYSTEINE (umol/l)
ABAN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ABA (umol/l)
ALAN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ALA (umol/l)
ARGN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ARG (umol/l)
ASNN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ASN (umol/l)
ASP_ACIDN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ASP ACID (umol/l)
CITN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: CIT (umol/l)
GLNN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: GLN (umol/l)
GLUT_ACIDN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: GLUT ACID (umol/l)
GLYN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: GLY (umol/l)
HISTN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: HIST (umol/l)
ISO_LEUN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ISO LEU (umol/l)
LEUN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: LEU (umol/l)
LYSN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: LYS (umol/l)
METHN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: METH (umol/l)
ORNN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ORN (umol/l)
PHEN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: PHE (umol/l)
SERN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: SER (umol/l)
TAURN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: TAUR (umol/l)
THRN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: THR (umol/l)
TRYPN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: TRYP (umol/l)

VARIABLE	Label
TYRN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: TYR (umol/l)
VALN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: VAL (umol/l)
CYSTEAMN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: CYSTEAMINE (I.S. area)
CYS_GLYN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: CYS-GLY (area)
D_DIMERN_MIX	F220: Coagulomics Mixed (pulm. artery) Blood: D-Dimer (ng/ml)
ETH_ISN_MIX	F220: Metabolomics Mixed (pulm. artery) Blood: ETH, I.S.
HOMOCYST_SYST	F220: Metabolomics Arterial (syst. artery): HOMOCYSTEINE (umol/l)
GLUTATH_SYST	F220: Metabolomics Arterial (syst. artery): GLUTATHIONE (umol/l)
CYST_SYST	F220: Metabolomics Arterial (syst. artery): CYSTEINE (umol/l)
ABAN_SYST	F220: Metabolomics Arterial (syst. artery): ABA (umol/l)
ALAN_SYST	F220: Metabolomics Arterial (syst. artery): ALA (umol/l)
ARGN_SYST	F220: Metabolomics Arterial (syst. artery): ARG (umol/l)
ASNN_SYST	F220: Metabolomics Arterial (syst. artery): ASN (umol/l)
ASP_ACIDN_SYST	F220: Metabolomics Arterial (syst. artery): ASP ACID (umol/l)
CITN_SYST	F220: Metabolomics Arterial (syst. artery): CIT (umol/l)
GLNN_SYST	F220: Metabolomics Arterial (syst. artery): GLN (umol/l)
GLUT_ACIDN_SYST	F220: Metabolomics Arterial (syst. artery): GLUT ACID (umol/l)
GLYN_SYST	F220: Metabolomics Arterial (syst. artery): GLY (umol/l)
HISTN_SYST	F220: Metabolomics Arterial (syst. artery): HIST (umol/l)
ISO_LEUN_SYST	F220: Metabolomics Arterial (syst. artery): ISO LEU (umol/l)
LEUN_SYST	F220: Metabolomics Arterial (syst. artery): LEU (umol/l)
LYSN_SYST	F220: Metabolomics Arterial (syst. artery): LYS (umol/l)
METHN_SYST	F220: Metabolomics Arterial (syst. artery): METH (umol/l)
ORNN_SYST	F220: Metabolomics Arterial (syst. artery): ORN (umol/l)
PHEN_SYST	F220: Metabolomics Arterial (syst. artery): PHE (umol/l)
SERN_SYST	F220: Metabolomics Arterial (syst. artery): SER (umol/l)
TAURN_SYST	F220: Metabolomics Arterial (syst. artery): TAUR (umol/l)
THRN_SYST	F220: Metabolomics Arterial (syst. artery): THR (umol/l)
TRYPN_SYST	F220: Metabolomics Arterial (syst. artery): TRYP (umol/l)
TYRN_SYST	F220: Metabolomics Arterial (syst. artery): TYR (umol/l)
VALN_SYST	F220: Metabolomics Arterial (syst. artery): VAL (umol/l)
CYSTEAMN_SYST	F220: Metabolomics Arterial (syst. artery): CYSTEAMINE (I.S. area)
CYS_GLYN_SYST	F220: Metabolomics Arterial (syst. artery): CYS-GLY (area)
D_DIMERN_SYST	F220: Coagulomics Arterial (syst. artery): D-Dimer (ng/ml)
ETH_ISN_SYST	F220: Metabolomics Arterial (syst. artery): ETH, I.S.

VARIABLE	Label
HOMOCYST_VEN	F220: Metabolomics Venous (SVC/peripheral): HOMOCYSTEINE (umol/l)
GLUTATH_VEN	F220: Metabolomics Venous (SVC/peripheral): GLUTATHIONE (umol/l)
CYST_VEN	F220: Metabolomics Venous (SVC/peripheral): CYSTEINE (umol/l)
ABAN_VEN	F220: Metabolomics Venous (SVC/peripheral): ABA (umol/l)
ALAN_VEN	F220: Metabolomics Venous (SVC/peripheral): ALA (umol/l)
ARGN_VEN	F220: Metabolomics Venous (SVC/peripheral): ARG (umol/l)
ASNN_VEN	F220: Metabolomics Venous (SVC/peripheral): ASN (umol/l)
ASP_ACIDN_VEN	F220: Metabolomics Venous (SVC/peripheral): ASP ACID (umol/l)
CITN_VEN	F220: Metabolomics Venous (SVC/peripheral): CIT (umol/l)
GLNN_VEN	F220: Metabolomics Venous (SVC/peripheral): GLN (umol/l)
GLUT_ACIDN_VEN	F220: Metabolomics Venous (SVC/peripheral): GLUT ACID (umol/l)
GLYN_VEN	F220: Metabolomics Venous (SVC/peripheral): GLY (umol/l)
HISTN_VEN	F220: Metabolomics Venous (SVC/peripheral): HIST (umol/l)
ISO_LEUN_VEN	F220: Metabolomics Venous (SVC/peripheral): ISO LEU (umol/l)
LEUN_VEN	F220: Metabolomics Venous (SVC/peripheral): LEU (umol/l)
LYSN_VEN	F220: Metabolomics Venous (SVC/peripheral): LYS (umol/l)
METHN_VEN	F220: Metabolomics Venous (SVC/peripheral): METH (umol/l)
ORNN_VEN	F220: Metabolomics Venous (SVC/peripheral): ORN (umol/l)
PHEN_VEN	F220: Metabolomics Venous (SVC/peripheral): PHE (umol/l)
SERN_VEN	F220: Metabolomics Venous (SVC/peripheral): SER (umol/l)
TAURN_VEN	F220: Metabolomics Venous (SVC/peripheral): TAUR (umol/l)
THRN_VEN	F220: Metabolomics Venous (SVC/peripheral): THR (umol/l)
TRYPN_VEN	F220: Metabolomics Venous (SVC/peripheral): TRYP (umol/l)
TYRN_VEN	F220: Metabolomics Venous (SVC/peripheral): TYR (umol/l)
VALN_VEN	F220: Metabolomics Venous (SVC/peripheral): VAL (umol/l)
CYSTEAMN_VEN	F220: Metabolomics Venous (SVC/peripheral): CYSTEAMINE (I.S. area)
CYS_GLYN_VEN	F220: Metabolomics Venous (SVC/peripheral): CYS-GLY (area)
D_DIMERN_VEN	F220: Coagulomics Venous (SVC/peripheral): D-Dimer (ng/ml)
ETH_ISN_VEN	F220: Metabolomics Venous (SVC/peripheral): ETH, I.S.
HOMOCYST_WDG	F220: Metabolomics Wedge: HOMOCYSTEINE (umol/l)
GLUTATH_WDG	F220: Metabolomics Wedge: GLUTATHIONE (umol/l)
CYST_WDG	F220: Metabolomics Wedge: CYSTEINE (umol/l)
ABAN_WDG	F220: Metabolomics Wedge: ABA (umol/l)
ALAN_WDG	F220: Metabolomics Wedge: ALA (umol/l)
ARGN_WDG	F220: Metabolomics Wedge: ARG (umol/l)

VARIABLE	Label
ASNN_WDG	F220: Metabolomics Wedge: ASN (umol/l)
ASP_ACIDN_WDG	F220: Metabolomics Wedge: ASP ACID (umol/l)
CITN_WDG	F220: Metabolomics Wedge: CIT (umol/l)
GLNN_WDG	F220: Metabolomics Wedge: GLN (umol/l)
GLUT_ACIDN_WDG	F220: Metabolomics Wedge: GLUT ACID (umol/l)
GLYN_WDG	F220: Metabolomics Wedge: GLY (umol/l)
HISTN_WDG	F220: Metabolomics Wedge: HIST (umol/l)
ISO_LEUN_WDG	F220: Metabolomics Wedge: ISO LEU (umol/l)
LEUN_WDG	F220: Metabolomics Wedge: LEU (umol/l)
LYSN_WDG	F220: Metabolomics Wedge: LYS (umol/l)
METHN_WDG	F220: Metabolomics Wedge: METH (umol/l)
ORNN_WDG	F220: Metabolomics Wedge: ORN (umol/l)
PHEN_WDG	F220: Metabolomics Wedge: PHE (umol/l)
SERN_WDG	F220: Metabolomics Wedge: SER (umol/l)
TAURN_WDG	F220: Metabolomics Wedge: TAUR (umol/l)
THRN_WDG	F220: Metabolomics Wedge: THR (umol/l)
TRYPN_WDG	F220: Metabolomics Wedge: TRYP (umol/l)
TYRN_WDG	F220: Metabolomics Wedge: TYR (umol/l)
VALN_WDG	F220: Metabolomics Wedge: VAL (umol/l)
CYSTEAMN_WDG	F220: Metabolomics Wedge: CYSTEAMINE (I.S. area)
CYS_GLYN_WDG	F220: Metabolomics Wedge: CYS-GLY (area)
D_DIMERN_WDG	F220: Coagulomics Wedge: D-Dimer (ng/ml)
ETH_ISN_WDG	F220: Metabolomics Wedge: ETH, I.S.

O. Clinical Centers local lab measurements (F200 – F207)

VARIABLE	Label
ANACOMB	F202: Antinuclear antibody (ANA) (1=positive)
EGFR	Calculated eGFR (mL/min/1.73m2)

P. Chest Computerized Tomography (CT) scan measurements (F262): Core reported data

VARIABLE	Label
PA_AORTA	CT: Ratio of PA diameter to ascending aorta diameter

Derived Variables Added to the 01/30/2023 Release

Form(s)	Variable / Label	Conditions expressed with form and question #s (If only the question #s are given, these relate to the form listed in the far left column –the form #s not shown in parentheses.)
(100) (120) (131) (201) (220)	met_syn "Metabolic Syndrome"	<ul style="list-style-type: none"> ▪ <u>Condition 1</u>: if form 100, Q6 = 2 and form 131, Q5 > 88.9 then 'Yes'. If (form 100, Q6 = 1 and form 131, Q5 ≤ 101.6 cm) or (if form 100, Q6 = 2 and Form 131, Q5 ≤ 88.9) then 'No'. ▪ <u>Condition 2</u>: if form 220, Q19 ≥ 150 then 'Yes'. If form 220, Q19 < 150 then 'No'. ▪ <u>Condition 3</u>: if form 100, Q6 = 1 and form 220, Q17 < 40 then 'Yes'. If form 100, Q6 = 2 and form 220, Q17 < 50 then also 'Yes'. If form 100, Q6 = 1 and form 220, Q17 ≥ 40 then 'No'. If form 100, Q6 = 2 and form 220, Q17 ≥ 50 then also 'No'. ▪ <u>Condition 4</u>: if form 201, Q13 ≥ 100 then 'Yes'. If form 201, Q13 < 100 then 'No'. ▪ <u>Condition 5</u>: if form 120, Q8 (sys) > 130 or form 120, Q8 (dia) > 85 then 'Yes'. If form 120, Q8 (sys) ≤ 130 and form 120, Q8 (dia) ≤ 85 then 'No' <ul style="list-style-type: none"> ▪ <u>Take sum of positive indications for conditions 1-5 (sum_pos)</u> ▪ <u>Take sum of non-missing values for conditions 1-5 (sum_nomiss)</u> <p>If sum_pos ≥ 3 then variable = 1 If (sum_pos = 2 and sum_nomiss = 5) or (sum_pos = 1 and sum_nomiss = 4) or (sum_pos = 0 and sum_nomiss = 3) then variable = 0</p>
102	sleep_apnea "Obstructive sleep apnea"	<p>If Q7d = 1 then 'Yes' If Q7d is missing and Q14e = 1 then 'Yes' If Q7d = 0 then 'No' If Q7d is missing and Q14e = 0 then 'No'</p>
102	scler "Scleroderma"	<p>If Q12d.4 = 1 or Q12d.5 = 1 or Q12d.7 = 1 then 'Yes' If Q12d.4 = 0 and Q12d.5 = 0 and Q12d.7 = 0 then 'No'</p>
102	lupusOth "Lupus/Other Connective Tissue Disease"	<p>If Q12d.1 = 1 or Q12d.2 = 1 or Q12d.3 = 1 or Q12d.6 = 1 then 'Yes' If Q12d.1 = 0 and Q12d.2 = 0 and Q12d.3 = 0 and Q12d.6 = 0 then 'No'</p>
102	resid_shunt "CHD Residual Shunt"	<p>If Q12g = 1 and Q12g.1 = 0 then 'Yes' If Q12g = 1 and Q12g.1 = 1 then 'No' (otherwise missing)</p>
102	ild "ILD (PVD assessment diagnosis)"	<p>If Q14d = 1 or Q14e = 1 or Q7b = 1 or Q7c = 1 then 'Yes' If Q14d = 0 and Q14e = 0 and Q7b = 0 and Q7c = 0 then 'No'</p>
283	redLVEF "Preserved vs. Reduced LVEF (for PH subjects)"	<p>If Q13c = 1 and Q13d.1 = 1 and Q13d.2 = 1 then 'Yes' If Q13b = 1 then 'No'</p>
103	arrhyth "Arrhythmia"	<p>If Q8 options 1, 2 or 3 are marked then 'Yes' If Q8 options 1, 2 and 3 are not marked then 'No'</p>
103	aneurysm "Aneurysm"	<p>If Q12 = 1 or Q13 = 1 then 'Yes' If Q12 = 0 and Q13 = 0 then 'No'</p>
105	phg3copd	<u>For category 1 (PH):</u>

(102) (270)	"Group 3 -COPD"	If (Q12a = 1 or 2) or (Q13a = 1 or 2) or (Q14a = 1 or 2) or (Q14c = 1 or 2) and if maximum of form 270, Q21e, tests 1-3 < 70% and if form 102, Q17 = 3 then variable = 1 <u>For category 2 (Comparators):</u> If (Q12a = 1 or 2) or (Q13a = 1 or 2) or (Q14a = 1 or 2) or (Q14c = 1 or 2) and if maximum of form 270, Q21e, tests 1-3 < 70% and if form 102, Q9 = 3 then variable = 2
139	fat_mass "Fat Mass"	'wt_kg' (derived variable) multiplied by Q9 multiplied by 0.01.
201	ckd_grade_g3 "CKD grade > 3 (Y/N)"	If Q15a (egfr -calculated on form) < 60 then 'Yes'. If Q15a (egfr -calculated on form) ≥ 60 then 'No'.
220	TSAT_d "Transferrin saturation (TSAT)(%)"	Step 1: Q12 multiplied by 70.9 multiplied by 5.59 Step 2: quantity from Step 1 divided by Q14
260	e_RV_str_vol "ECHO: RV Stroke Volume Index (g/m/beat/m^2)"	▪ Component 1: Q97 ^{squared} divided by 4 ▪ Component 2: Q98 divided by 'bsa' (derived variable) Variable = pi multiplied by Component 1 multiplied by Component 2.
260	e_LV_str_vol "ECHO: LV Stroke Volume Index (g/m/beat/m^2)"	Same as above except Component 2 = Q53 ^{squared} divided by 4
260	e_hep_vein_ds_ratio "Hepatic Vein Peak D over S Wave Ratio"	Q23 divided by Q24
260	e_mitral_valve_e_a_ratio "Mitral Valve E/A Ratio"	Q60 divided by Q24
260	e_e_ratio "Tricuspid Valve E over e' Velocity Ratio"	Q108 divided by Q106
260	e_lvedv_hyb "LVED Volume (mL -hybrid)"	If Q24 is not missing then variable = Q24 If Q24 is missing and Q44 is not missing then variable = Q44 If Q24 and Q44 are missing and Q47 is not missing then variable = Q47 If Q24, Q44 and Q47 are missing and Q45 is not missing then variable = Q45
260	e_lvesv_hyb "LVES Volume (mL -hybrid)"	If Q51 is not missing then variable = Q51 If Q51 is missing and Q48 is not missing then variable = Q48 If Q51 and Q48 are missing and Q52 is not missing then variable = Q52 If Q51, Q48 and Q52 are missing and Q49 is not missing then variable = Q49
260	e_lvef_hyb "LV Ejection Fraction (% -hybrid)"	If Q37 is not missing then variable = Q37 If Q37 is missing and Q36 is not missing then variable = Q36 If Q37 and Q36 are missing and Q38 is not missing then variable = Q38
260	e_lav_hyb "Left Atrial Volume (mL -hybrid)"	If Q29 is not missing then variable = Q29 If Q29 is missing and Q28 is not missing then variable = Q28
260	e_lvsv_hyb "LV Stroke Volume (mL -hybrid)"	If Q42 is not missing then variable = Q42 If Q42 is missing and Q43 is not missing then variable = Q43
260	e_lvco_hyb "LV Cardiac Output (L/min - hybrid)"	If Q31 is not missing then variable = Q31 If Q31 is missing and Q30 is not missing then variable = Q30

260	e_rv_frac_short_hyb "RV Fractional Shortening (% - hybrid)"	If Q85 is not missing then variable = Q85 If Q85 is missing and Q86 is not missing then variable = Q86
260	e_rveda_hyb "RV End Diastolic Area (cm2 - hybrid)"	If Q80 is not missing then variable = Q80 If Q80 is missing and Q81 is not missing then variable = Q81
260	e_rvesa_hyb "RV End Systolic Area (cm2 - hybrid)"	If Q82 is not missing then variable = Q82 If Q82 is missing and Q83 is not missing then variable = Q83
260	lhd_a "Left Heart Disease"	<ul style="list-style-type: none"> ▪ intermediate variable: If Q37 is not missing then intermediate var. = Q37. If Q37 is missing and Q35 is not missing then intermediate var. = Q35. If Q37 and Q35 are missing and Q38 is not missing then intermediate var. = Q38. If Q37, Q35 and Q38 are missing and Q36 is not missing then intermediate var. = Q36. <p>If Q28a > 15 <i>or</i> intermediate variable < 50 then 'Yes' If Q28a ≤ 15 <i>and</i> intermediate variable ≥ 50 then 'No'</p>
260	rhf_c "Right Heart Failure (definition 1)"	If Q85 < 31 then 'Yes' If Q85 ≥ 31 then 'No'
260	rhf_d "Right Heart Failure (definition 2)"	If Q72 > 10 then 'Yes' If Q72 ≤ 10 then 'No'
280	r_hypox "Rest: Hypoxemia"	<ul style="list-style-type: none"> ▪ intermediate variable = minimum of Q21c and Q21d If intermediate variable <90% then 'Yes' If intermediate variable ≥90% then 'No'
283	stroke_vol_ind_tdco "Rest: Stroke Volume Index (SVI) (ml/m^2)"	Step 1: Resting cardiac index (derived variable –'card_index') <i>divided by</i> Q21h Step 2: quantity from Step 1 <i>multiplied by</i> 1000
283	oc_stroke_vol_ind_tdco "O2: Stroke Volume Index (SVI) (ml/m^2)"	Step 1: Oxygen cardiac index (derived variable –'oc_card_index') <i>divided by</i> Q41g Step 2: quantity from Step 1 <i>multiplied by</i> 1000
283	vc_stroke_vol_ind_tdco "VC: Stroke Volume Index (SVI) (ml/m^2)"	Step 1: Vasodilation cardiac index (derived variable –'vc_card_index') <i>divided by</i> Q54g Step 2: quantity from Step 1 <i>multiplied by</i> 1000
283	fc_stroke_vol_ind_tdco "FC: Stroke Volume Index (SVI) (ml/m^2)"	Step 1: Fluid Challenge cardiac index (derived variable –'fc_card_index') <i>divided by</i> Q67g Step 2: quantity from Step 1 <i>multiplied by</i> 1000
283	rvswi "Rest: Right ventricular stroke work index (g/m/beat/m2)"	Step 1: Q35a <i>minus</i> Q22a Step 2: quantity from Step 1 <i>multiplied by</i> resting Stroke Volume Index (derived variable –' stroke_vol_ind_tdco') <i>multiplied by</i> 0.0136
283	lvtmp_r "Rest: Left ventricular transmural pressure (LVTMP) (mmHg)"	Q28a <i>minus</i> Q22a
283	new_rhc_ratio_r "Rest: RAP / PCWP"	Q22a <i>divided by</i> Q28a
283	svpp	▪ <u>intermediate variable 1</u> = Q33a <i>minus</i> Q34a

	"Rest: Capacitance (mL/bpm*mmHg)"	<ul style="list-style-type: none"> ▪ intermediate variable 2 = resting cardiac output (derived variable – ‘card_output’) <i>divided by</i> Q21h Step 1: intermediate variable 2 <i>multiplied by</i> 1000 Step 2: quantity from Step 1 <i>divided by</i> intermediate variable 1.
291, 292	icpet_peak_pvr "PVR (iCPET)(Wood units) at peak exercise"	<ul style="list-style-type: none"> Step 1: At Peak Exerc.: Mean Pulmonary Artery Pressure (mPAP) (derived variable – ‘cpet_peak_mpap’??) <i>minus</i> At Peak Exerc.: Pulmonary Capillary Wedge (PCW) (derived variable – ‘cpet_peak_pcwp’??) Step 2: <i>divide</i> quantity from Step 1 by Peak Exerc.: Direct Fick Cardiac Output (derived variable – ‘cpet_peak_dfco’??)
290, 291	icpet_peak_pa_comp "PA Compliance (iCPET) (dV/dP) at peak exercise"	<ul style="list-style-type: none"> Step 1: At Peak Exerc.: Systolic BP (derived variable – ‘cpet_peak_sbp’??) <i>minus</i> At Peak Exerc.: Diastolic BP (derived variable – ‘cpet_peak_dbp’??) Step 2: <i>divide</i> At Peak Exerc.: SvO2 (derived variable – ‘cpet_peak_svo2’) by quantity from step 1.
(133) (115) (220)	compera_4strat "COMPERA 2.0: 4-stratum risk score"	<ul style="list-style-type: none"> ▪ Functional Class element (1): If functional class (derived variable – ‘fc’) is 1 or 2 then element 1 = 1 If functional class (derived variable – ‘fc’) is 3 then element 1 = 3 If functional class (derived variable – ‘fc’) is 4 then element 1 = 4 ▪ Total Distance Walked element (2): If form 133, Q14 > 440 then element 2 = 1 If form 133, Q14 is ≥ 320 and ≤ 440 then element 2 = 2 If form 133, Q14 is ≥ 165 and < 320 then element 2 = 3 If form 133, Q14 is < 165 then element 2 = 4 ▪ NT Pro BNP element (3): If form 220, Q7 < 300 then element 3 = 1 If form 220, Q7 is ≥ 300 and < 650 then element 3 = 2 If form 220, Q7 is ≥ 650 and ≤ 1100 then element 3 = 3 If form 220, Q7 > 1100 then element 3 = 4 ▪ Component 1: take sum of elements 1-3 ▪ Component 2: take sum of the number of non-missing elements Step 1: component 1 <i>divided by</i> component 2 Step 2: <i>round up</i> result of step 1 to the next integer.
(133) (115) (220)	french_crit "French Non-invasive risk score"	<ul style="list-style-type: none"> ▪ Functional Class element (1): If functional class (derived variable – ‘fc’) is 1 or 2 then element 1 = 1 If functional class (derived variable – ‘fc’) is > 1 or 2 then element 1 = 0 ▪ Total Distance Walked element (2): If form 133, Q14 ≤ 440 then element 2 = 1 If form 133, Q14 > 440 then element 2 = 0 ▪ NT Pro BNP element (3): If form 220, Q7 ≤ 300 then element 3 = 1 If form 220, Q7 > 300 then element 3 = 0 Variable = sum of elements 1-3
		<ul style="list-style-type: none"> ▪ Sum of missing data, part 1: for the more highly predictive variables: (derived variable – ‘fc’, form 133, Q14 and form 220, Q7), sum the number of missing values. ▪ Sum of missing data, part 2: also sum up the number of missing values for the less predictive variables: (form 120, Q8(a), form 120, Q6 and form 201, Q15a (egfr -calculated on form)) ▪ Functional Class element (1):

		<p>If functional class (derived variable –'fc') = 1 then element 1 = -1 If functional class (derived variable–'fc') = 2 then element 1 = 0 If functional class (derived variable–'fc') = 3 then element 1 = 1 If functional class (derived variable–'fc') = 4 then element 1 = 1 If functional class (derived variable –'fc') is missing and sum of important predictors (missing data, part 1) = 1 and sum of non-important predictors (missing data, part 2) = 0 then element 1 = 0</p> <p>▪ Total Distance Walked element (2): If form 133, Q14 ≥ 440 then element 2 = -2 If form 133, Q14 is ≥ 320 and < 440 then element 2 = -1 If form 133, Q14 is ≥ 165 and < 320 then element 2 = 0 If form 133, Q14 is < 165 then element 2 = 1 If form 133, Q14 is missing and sum of important predictors (missing data, part 1) = 1 and sum of non-important predictors (missing data, part 2) = 0 then element 2 = 0</p> <p>▪ NT Pro BNP element (3): If form 220, Q7 < 300 then element 3 = -2 If form 220, Q7 is ≥ 300 and < 1100 then element 3 = 0 If form 220, Q7 ≥ 1100 then element 3 = 2 If form 220, Q7 is missing and sum of important predictors (missing data, part 1) = 1 and sum of non-important predictors (missing data, part 2) = 0 then element 3 = 0</p> <p>▪ Systolic blood pressure element (4): If form 120, Q8(a) ≥ 100 then element 4 = 0 If form 120, Q8(a) < 100 then element 4 = 1 If form 120, Q8(a) is missing and sum of important predictors (missing data, part 1) = 0 then element 4 = 0</p> <p>▪ Heart rate element (5): If form 120, Q6 > 96 then element 5 = 1 If form 120, Q6 ≤ 96 then element 5 = 0 If form 120, Q6 value is missing and sum of important predictors (missing data, part 1) = 0 then element 5 = 0</p> <p>▪ eGFR element (6): If form 201, Q15a (egfr -calculated on form) < 60 then element 6 = 1 If form 201, Q15a (egfr -calculated on form) ≥ 60 then element 6 = 0 If form 201, Q15a (egfr -calculated on form) value is missing and sum of important predictors (missing data, part 1) = 0 then element 6 = 0</p> <p>Take sum of elements 1-6 and add 6.</p>
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