

Supplemental Material

Data S1.

Supplemental Methods

Systematic review search strategy

Ovid Medline

08/17/17

1,184 results

Updated search = 168 results after limit to yr= "2017-Current" on 12/26/18

Updated search = 39 results after limit to yr="2019 -Current" on 04/18/19

Coronary flow reserve.mp. OR Coronary flow reserves.mp. OR coronary flow velocity reserve.mp. OR coronary flow velocity reserves.mp. OR coronary flow reserve velocity.mp. OR myocardial flow reserve.mp. OR CFVR.mp. OR (("Myocardial blood flow" adj8 (stress OR hyperemia)) AND rest).mp.

AND

(Measure*.mp. OR Quantif*.mp. OR heart output determination.mp. OR cardiac output determination.mp. OR Exp diagnostic imaging/ OR Diagnostic imaging.mp. OR Diagnostic imaging.fs. OR ((intracardiac OR EKG OR cardiac) adj2 imaging).mp. OR angiocardiograph*.mp. OR angiocardiology.mp. OR angiocardiology.mp. OR cardioangiography.mp. OR heart angiography.mp. OR heart arteriography.mp. OR scintiangiography.mp. OR cineangiography.mp. OR (coronary adj1 (angiograph* OR arteriograph* OR arteriogram)).mp. OR Exp echocardiography/ OR echocardiograph*.mp. OR echocardiogram.mp. OR cardiac echography.mp. OR cardiac scanning.mp. OR cardiac echography.mp. OR cardioechography.mp. OR echo cardiogram.mp. OR echo cardiography.mp. OR echocardiogram.mp. OR heart echo sounding.mp. OR heart echography.mp. OR heart scanning.mp. OR myocardium scanning.mp. OR myocardial perfusion imaging.mp. OR myocardial scintigraphy.mp. OR radionuclide ventriculography.mp. OR ("myocardial perfusion" adj7 assess*).mp. OR ("myocardial blood flow" adj7 assess*).mp. OR Exp Thermodilution/ OR thermodilution.mp. OR thermal dilution.mp. OR adenosine.mp. OR dipyridamole.mp. OR Dipyridamol.mp. OR dipyridimole.mp. OR dipiridamole.mp. OR (Doppler adj1 tte).mp. OR ((transthoracic OR flowmetry OR method OR system OR Technique) adj1 doppler).mp. OR vasodilator*.mp. OR nuclear stress test.mp. OR Exp Positron-Emission Tomography/ OR positron emission tomography.mp. OR (PET adj2 scan*).mp. OR positron emission tomographic scan.mp. OR positron emission tomographic scanning.mp. OR positron tomography.mp. OR positron-emission tomography.mp. OR magnetic resonance.mp. OR mri.mp. OR Exp ultrasonography/ OR ultrasound.mp.)

AND

(Follow-up.mp. OR Follow*.mp. OR Predictor*.mp. OR Outcome*.mp. OR Exp death/ OR Death.mp. OR Exp myocardial infarction/ OR ((myocardi* OR cardiac OR heart) adj1 infarct*).mp. OR (cardiovascular adj1 stroke*).mp. OR (heart adj1 attack*).mp. OR Exp hospitalization/ OR hospitalization.mp. OR ((hospital OR patient*) adj2 adm*).mp. OR ((hospital or patient*) adj2 readmi*).mp. OR major adverse

cardiovascular events.mp. OR major adverse cardiovascular event.mp. OR MACE.mp. OR MACEs.mp. OR Exp heart failure/ OR ((cardiac OR heart OR myocardial) adj1 failure).mp. OR ((prospective OR longitudinal) adj1 stud*).mp. OR years after.mp.)

Embase

08/18/17

2,401 results

Updated search = 390 results after limit to [18-8-2017]/sd NOT [27-12-2018]/sd on 12/26/18

Updated search = 104 results after limit to [26-12-2018]/sd NOT [19-4-2019]/sd on 04/18/19

('coronary flow reserve'/exp OR 'Coronary flow reserve':ti,ab,kw,de OR 'Coronary flow reserves':ti,ab,kw,de OR 'coronary flow velocity reserve':ti,ab,kw,de OR 'coronary flow velocity reserves':ti,ab,kw,de OR 'coronary flow reserve velocity':ti,ab,kw,de OR 'myocardial flow reserve':ti,ab,kw,de OR 'CFVR':ti,ab,kw,de OR (('Myocardial blood flow' near/8 (stress OR hyperemia)) AND rest):ti,ab,kw,de)

AND

('cardiac imaging'/exp OR 'angiocardiography'/exp OR 'echocardiography'/exp OR 'ultrasound'/exp OR 'doppler flowmetry'/exp OR 'positron emission tomography'/exp OR Measure*:ti,ab,kw,de OR Quantif*:ti,ab,kw,de OR 'heart output determination':ti,ab,kw,de OR 'cardiac output determination':ti,ab,kw,de OR 'diagnostic imaging'/exp OR 'Diagnostic imaging':ti,ab,kw,de OR ((intracardiac OR EKG OR cardiac) near/2 imaging):ti,ab,kw,de OR 'angiocardiograph*':ti,ab,kw,de OR 'angio cardiography':ti,ab,kw,de OR 'angiocardiogram':ti,ab,kw,de OR 'cardioangiography':ti,ab,kw,de OR 'heart angiography':ti,ab,kw,de OR 'heart arteriography':ti,ab,kw,de OR 'scintiangiocardiography':ti,ab,kw,de OR 'cineangiocardiography':ti,ab,kw,de OR (coronary near/1 (angiograph* OR arteriograph* OR arteriogram)):ti,ab,kw,de OR echocardiograph*:ti,ab,kw,de OR echocardiogram:ti,ab,kw,de OR 'cardiac echography':ti,ab,kw,de OR 'cardiac scanning':ti,ab,kw,de OR 'cardial echography':ti,ab,kw,de OR 'cardioechography':ti,ab,kw,de OR 'echo cardiogram':ti,ab,kw,de OR 'echo cardiography':ti,ab,kw,de OR 'echocardiogram':ti,ab,kw,de OR 'heart echo sounding':ti,ab,kw,de OR 'heart echography':ti,ab,kw,de OR 'heart scanning':ti,ab,kw,de OR 'myocardium scanning':ti,ab,kw,de OR 'myocardial perfusion imaging':ti,ab,kw,de OR 'myocardial scintigraphy':ti,ab,kw,de OR 'radionuclide ventriculography':ti,ab,kw,de OR ('myocardial perfusion' near/7 assess*):ti,ab,kw,de OR ('myocardial blood flow' near/7 assess*):ti,ab,kw,de OR 'Thermodilution'/exp OR 'thermodilution':ti,ab,kw,de OR 'thermal dilution':ti,ab,kw,de OR 'adenosine':ti,ab,kw,de OR 'dipyridamole':ti,ab,kw,de OR 'Dipyridamol':ti,ab,kw,de OR 'dipyridimole':ti,ab,kw,de OR 'dipiridamole':ti,ab,kw,de OR (Doppler near/1 tte):ti,ab,kw,de OR ((transthoracic OR flowmetry OR method OR system OR Technique) near/1 doppler):ti,ab,kw,de OR vasodilator*:ti,ab,kw,de OR 'nuclear stress test':ti,ab,kw,de OR 'positron emission tomography':ti,ab,kw,de OR (PET near/2 scan*):ti,ab,kw,de OR 'positron emission tomographic scan':ti,ab,kw,de OR 'positron emission tomographic scanning':ti,ab,kw,de OR 'positron tomography':ti,ab,kw,de OR 'positron-emission tomography':ti,ab,kw,de OR 'magnetic resonance':ti,ab,kw,de OR 'mri':ti,ab,kw,de OR 'ultrasound':ti,ab,kw,de)

AND

('follow up'/exp OR 'outcome assessment'/exp OR 'patient assessment'/exp OR 'heart infarction'/exp

OR 'major adverse cardiac event'/exp OR 'Follow-up':ti,ab,kw,de OR 'Follow*':ti,ab,kw OR 'Predictor*':ti,ab,kw,de OR 'Outcome*':ti,ab,kw,de OR 'death'/exp OR 'Death':ti,ab,kw,de OR ((myocardi* OR cardiac OR heart) near/1 infarct*):ti,ab,kw,de OR (cardiovascular near/1 stroke*):ti,ab,kw,de OR (heart near/1 attack*):ti,ab,kw,de OR 'hospitalization'/exp OR 'hospitalization':ti,ab,kw,de OR ((hospital OR patient*) near/2 admi*):ti,ab,kw,de OR ((hospital or patient*) near/2 readmi*):ti,ab,kw,de OR 'major adverse cardiovascular events':ti,ab,kw,de OR 'major adverse cardiovascular event':ti,ab,kw,de OR 'MACE':ti,ab,kw,de OR 'MACES':ti,ab,kw,de OR 'heart failure'/exp OR ((cardiac OR heart OR myocardial) near/1 failure):ti,ab,kw,de OR ((prospective OR longitudinal) near/1 stud*):ti,ab,kw,de OR 'years after':ti,ab,kw,de OR 'major adverse cardiac and cerebrovascular events':ti,ab,kw OR 'major adverse cardiac and cerebrovascular event':ti,ab,kw OR 'macce':ti,ab,kw OR 'macces':ti,ab,kw)

Cochrane Library

08/18/17

Cochrane Database of Systematic Reviews– 0 results

Cochrane Central Register of Controlled Trials – 170 results

Database of Abstracts of Reviews of Effect – 0 results

Updated search for Cochrane Central Register of Controlled Trials (Central) = 32 results after limit to “Year first published 2017 to 2018” on 12/26/18

Updated search for Cochrane Database of Systematic Reviews = 0 results after limit to “Year first published 2017 to 2018” on 12/26/18

Updated search for Cochrane Central Register of Controlled Trials (Central) = 43 results after limit to Date added to CENTRAL trials database 26/12/2018 to 18/04/2019 on 12/26/18

Updated search for Cochrane Database of Systematic Reviews = 0 results after limit to “Year first published 2017 to 2018” on 12/26/18

(“Coronary flow reserve”:ti,ab,kw OR “Coronary flow reserves”:ti,ab,kw OR “coronary flow velocity reserve”:ti,ab,kw OR “coronary flow velocity reserves”:ti,ab,kw OR “coronary flow reserve velocity”:ti,ab,kw OR “myocardial flow reserve”:ti,ab,kw OR CFVR:ti,ab,kw OR (“Myocardial blood flow” near/8 (stress OR hyperemia)) AND rest):ti,ab,kw)

AND

(Measure*:ti,ab,kw OR Quantif*:ti,ab,kw OR “heart output determination”:ti,ab,kw OR “cardiac output determination”:ti,ab,kw OR [mh “diagnostic imaging”] OR “Diagnostic imaging”:ti,ab,kw OR [mh “Diagnostic imaging”/ae] OR ((intracardiac OR EKG OR cardiac) near/2 imaging):ti,ab,kw OR angiocardiograph*:ti,ab,kw OR “angio cardiology”:ti,ab,kw OR “angiocardiology”:ti,ab,kw OR “cardioangiography”:ti,ab,kw OR “heart angiography”:ti,ab,kw OR “heart arteriography”:ti,ab,kw OR “scintiangiography”:ti,ab,kw OR “cineangiography”:ti,ab,kw OR (coronary near/1 (angiograph* OR arteriograph* OR arteriogram)):ti,ab,kw OR [mh echocardiography] OR echocardiograph*:ti,ab,kw OR “echocardiogram”:ti,ab,kw OR “cardiac echography”:ti,ab,kw OR “cardiac scanning”:ti,ab,kw OR “cardial echography”:ti,ab,kw OR “cardioechography”:ti,ab,kw OR “echo cardiogram”:ti,ab,kw OR “echo cardiology”:ti,ab,kw OR “echocardiogram”:ti,ab,kw OR “heart echo

sounding":ti,ab,kw OR "heart echography":ti,ab,kw OR "heart scanning":ti,ab,kw OR "myocardium scanning":ti,ab,kw OR "myocardial perfusion imaging":ti,ab,kw OR "myocardial scintigraphy":ti,ab,kw OR "radionuclide ventriculography":ti,ab,kw OR ("myocardial perfusion" near/7 assess*):ti,ab,kw OR ("myocardial blood flow" near/7 assess*):ti,ab,kw OR [mh Thermodilution] OR "thermodilution":ti,ab,kw OR "thermal dilution":ti,ab,kw OR "adenosine":ti,ab,kw OR "dipyridamole":ti,ab,kw OR "Dipyridamol":ti,ab,kw OR "dipyridimole":ti,ab,kw OR "dipiridamole":ti,ab,kw OR (Doppler near/1 tte):ti,ab,kw OR ((transthoracic OR flowmetry OR method OR system OR Technique) near/1 doppler):ti,ab,kw OR vasodilator*:ti,ab,kw OR "nuclear stress test":ti,ab,kw OR [mh "Positron-Emission Tomography"] OR "positron emission tomography":ti,ab,kw OR (PET near/2 scan*):ti,ab,kw OR "positron emission tomographic scan":ti,ab,kw OR "positron emission tomographic scanning":ti,ab,kw OR "positron tomography":ti,ab,kw OR "positron-emission tomography":ti,ab,kw OR "magnetic resonance":ti,ab,kw OR "mri":ti,ab,kw OR [mh ultrasonography] OR ultrasound:ti,ab,kw)

AND

(Follow-up:ti,ab,kw OR Follow*:ti,ab,kw OR Predictor*:ti,ab,kw OR Outcome*:ti,ab,kw OR [mh death] OR Death:ti,ab,kw OR [mh "myocardial infarction"] OR ((myocardi* OR cardiac OR heart) near/1 infarct*):ti,ab,kw OR (cardiovascular near/1 stroke*):ti,ab,kw OR (heart near/1 attack*):ti,ab,kw OR [mh hospitalization] OR hospitalization:ti,ab,kw OR ((hospital OR patient*) near/2 admi*):ti,ab,kw OR ((hospital or patient*) near/2 readmi*):ti,ab,kw OR "major adverse cardiovascular events":ti,ab,kw OR "major adverse cardiovascular event":ti,ab,kw OR MACE:ti,ab,kw OR MACES:ti,ab,kw OR [mh "heart failure"] OR ((cardiac OR heart OR myocardial) near/1 failure):ti,ab,kw OR ((prospective OR longitudinal) near/1 stud*):ti,ab,kw OR "years after":ti,ab,kw)

Scopus

08/18/17

1,756 results

Updated search = 129 results after the limit: LIMIT-TO (PUBYEAR , 2018) on 12/26/18

Updated search = 41 results after the limit: LIMIT-TO (PUBYEAR , 2019) on 04/18/19

((TITLE-ABS-KEY ("Follow-up")) OR (TITLE-ABS-KEY (follow*)) OR (TITLE-ABS-KEY (predictor*)) OR (TITLE-ABS-KEY (outcome*)) OR (TITLE-ABS-KEY ("Death")) OR (TITLE-ABS-KEY ((myocardi* OR cardiac OR heart) W/1 infarct*)) OR (TITLE-ABS-KEY (cardiovascular W/1 stroke*)) OR (TITLE-ABS-KEY (heart W/1 attack*)) OR (TITLE-ABS-KEY ("hospitalization")) OR (TITLE-ABS-KEY ((hospital OR patient*) W/2 admi*)) OR (TITLE-ABS-KEY ((hospital OR patient*) W/2 readmi*)) OR (TITLE-ABS-KEY ("major adverse cardiovascular events")) OR (TITLE-ABS-KEY ("major adverse cardiovascular event")) OR (TITLE-ABS-KEY ("MACE")) OR (TITLE-ABS-KEY ("MACES")) OR (TITLE-ABS-KEY ((cardiac OR heart OR myocardial) W/1 failure)) OR (TITLE-ABS-KEY ((prospective OR longitudinal) W/1 stud*)) OR (TITLE-ABS-KEY ("years after"))) **AND** ((TITLE-ABS-KEY (measure*)) OR (TITLE-ABS-KEY (quantif*)) OR (TITLE-ABS-KEY ("heart output determination")) OR (TITLE-ABS-KEY ("cardiac output determination")) OR (TITLE-ABS-KEY ("Diagnostic imaging")) OR (TITLE-ABS-KEY ((intracardiac OR ekg OR cardiac) W/2 imaging)) OR (TITLE-ABS-KEY ("angiocardiograph*")) OR (TITLE-ABS-KEY ("angio cardiography")) OR (TITLE-ABS-KEY ("angiocardiogram")) OR (TITLE-ABS-KEY ("cardioangiography")) OR (TITLE-ABS-KEY ("heart

angiography")) OR (TITLE-ABS-KEY ("heart arteriography")) OR (TITLE-ABS-KEY ("scintiangiocardiology")) OR (TITLE-ABS-KEY ("cineangiocardiology")) OR (TITLE-ABS-KEY (coronary W/1 (angiograph* OR arteriograph* OR arteriogram))) OR (TITLE-ABS-KEY (echocardiograph*)) OR (TITLE-ABS-KEY (echocardiogram)) OR (TITLE-ABS-KEY ("cardiac echography")) OR (TITLE-ABS-KEY ("cardiac scanning")) OR (TITLE-ABS-KEY ("cardial echography")) OR (TITLE-ABS-KEY ("cardioechography")) OR (TITLE-ABS-KEY ("echo cardiogram")) OR (TITLE-ABS-KEY ("echo cardiography")) OR (TITLE-ABS-KEY ("echocardiogram")) OR (TITLE-ABS-KEY ("heart echo sounding")) OR (TITLE-ABS-KEY ("heart echography")) OR (TITLE-ABS-KEY ("heart scanning")) OR (TITLE-ABS-KEY ("myocardium scanning")) OR (TITLE-ABS-KEY ("myocardial perfusion imaging")) OR (TITLE-ABS-KEY ("myocardial scintigraphy")) OR (TITLE-ABS-KEY ("radionuclide ventriculography")) OR (TITLE-ABS-KEY ("myocardial perfusion" W/7 assess*)) OR (TITLE-ABS-KEY ("myocardial blood flow" W/7 assess*)) OR (TITLE-ABS-KEY ("thermodilution")) OR (TITLE-ABS-KEY ("thermal dilution")) OR (TITLE-ABS-KEY ("adenosine")) OR (TITLE-ABS-KEY ("dipyridamole")) OR (TITLE-ABS-KEY ("Dipyridamol")) OR (TITLE-ABS-KEY ("dipyridimole")) OR (TITLE-ABS-KEY ("dipiridamole")) OR (TITLE-ABS-KEY (doppler W/1 tte)) OR (TITLE-ABS-KEY ((transthoracic OR flowmetry OR method OR system OR technique) W/1 doppler)) OR (TITLE-ABS-KEY (vasodilator*)) OR (TITLE-ABS-KEY ("nuclear stress test")) OR (TITLE-ABS-KEY ("positron emission tomography")) OR (TITLE-ABS-KEY (pet W/2 scan*)) OR (TITLE-ABS-KEY ("positron emission tomographic scan")) OR (TITLE-ABS-KEY ("positron emission tomographic scanning")) OR (TITLE-ABS-KEY ("positron tomography")) OR (TITLE-ABS-KEY ("positron-emission tomography")) OR (TITLE-ABS-KEY ("magnetic resonance")) OR (TITLE-ABS-KEY ("mri")) OR (TITLE-ABS-KEY ("ultrasound"))) **AND** ((TITLE-ABS-KEY ("Coronary flow reserve")) OR (TITLE-ABS-KEY ("Coronary flow reserves")) OR (TITLE-ABS-KEY ("coronary flow velocity reserve")) OR (TITLE-ABS-KEY ("coronary flow velocity reserves")) OR (TITLE-ABS-KEY ("coronary flow reserve velocity")) OR (TITLE-ABS-KEY ("myocardial flow reserve")) OR (TITLE-ABS-KEY ("CFVR")) OR (TITLE-ABS-KEY (("Myocardial blood flow" W/8 (stress OR hyperemia)) AND rest)))

Clinicaltrials.gov

8/17/17

45 results

Updated search = 11 results after limit "First posted from 08/01/2017 to 12/26/2018" on 12/26/18

Updated search = 19 results after limit "First posted from 12/26/2018 to 04/18/2019" on 12/26/18

(coronary flow reserve OR coronary flow velocity) AND follow up

Table S1. Results of quality appraisal using the Newcastle-Ottawa scale.

Study	Selection				Compara- bility	Outcome			Total Score
	Representative- ness of the exposed cohort	Selection of the non- exposed cohort	Ascertain- ment of exposure	Demonstra- tion that outcome was not present at start of study	Compara- bility of the cohorts	Assess- ment	Adequa- cy of follow- up duration	Complete- ness of follow-up	
Marks 2004 ²¹	*	*	*	*	**	*	*		8
Herzog 2009 ²²	*	*	*	*	**	*	*	*	9
Cortigiani 2010 ²⁹	*	*	*	*	**	*	*		8
Ziadi 2011 ³⁰	*	*	*	*	**	*	*	*	9
Cortigiani 2012 ²³	*	*	*	*	**	*	*		8
Lowenstein 2014 ²⁴	*	*	*	*	**	*	*		8
Murthy 2014 ²⁵	*	*	*	*	**	*	*		8
Dikic 2015 ³¹	*	*	*	*	**	*	*		8
Gan 2017 ²⁶	*	*	*	*	**	*	*	*	9
Lee 2018 ²⁷	*	*	*	*	**	*	*		8
Monroy- Gonzalez 2018 ²⁸	*	*	*	*	**	*	*	*	9