

Clinical trials of warfarin

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1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
warfarin vs control (on top of aspirin)			
WARIS , 1999 n=1208/1206 follow-up: 65279;37 months	warfarin 2.84.8 versus placebo	survivors of acute myocardial infarction	Parallel groups double blind
APRICOT-2 , 2002 n=135/139 follow-up: 3 months	moderate-intensity coumarin target INR 2-3 (+aspirin) versus aspirin	Acute MI after thrombolytics	Parallel groups open the Netherlands
CARS (warafarin 3mg) , 1997 n=5410/3393 follow-up: 14 months	warfarin fixed dose 3mg/d + 80 mg ASA versus aspirin 160 mg/d	AMI	Parallel groups double blind North America
CARS (warfarin 1mg) , 1997 n=2028/3393 follow-up: 14 months	warfarin 1mg/d + aspirin 80mg/d versus aspirin 160 mg/d	patients who had had myocardial infarction	Parallel groups double blind North America
CHAMP , 2002 n=2522/2537 follow-up: 2.7 years	warfarin target INR 1.5-2.5 + aspirin 81 mg daily versus aspirin 162 mg/d	AMI (patients enrolled within 14 days of infarction)	Parallel groups open US
LoWASA , 2004 n=1659/1641 follow-up: 5 years	warfarin fixed dose 1.25mg/d + ASA 75mg/d versus aspirin alone	AMI	Parallel groups open Sweden
WARIS II (warfarin+ASA) , 2002 n=4927/4669 follow-up: 4 years	warfarin target INR 2-2.5 +ASA 75mg/d versus ASA 160mg/d	patients hospitalized for acute myocardial infarction	Parallel groups open Norway
Zibaenezhad , 2004 n=70/70 follow-up: 1 year	Warfarin target INR 65279;23 +aspirin versus aspirin 100 mg/day	Acute MI	Parallel groups open

continued...

Trial	Treatments	Patients	Trials design and methods
warfarin vs placebo (on top of aspirin)			
Williams , 1997 n=6/5 follow-up: 2.5 months	warfarin target INR 65279;22.5 +aspirin versus placebo +aspirin	Acute MI, unstable angina	Parallel groups double blind
warfarin vs aspirin			
WARIS II (warfarin alone) , 2002 n=1216/1206 follow-up: 48 months	warfarin target INR 2.8-4.2 versus ASA 160mg/d	patients hospitalized for acute myocardial infarction	Parallel groups NA Norway

More details and results :

- antithrombotics for acute myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q36>
- anticoagulant for acute myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q172>

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WARIS, 1999:

Smith P, Arnesen H, Holme I The effect of warfarin on mortality and reinfarction after myocardial infarction. N Engl J Med 1990;323:147-52 [2194126]

APRICOT-2, 2002:

Brouwer MA, van den Bergh PJ, Aengevaeren WR, Veen G, Luijten HE, Hertzberger DP, van Boven AJ, Vromans RP, Uijen GJ, Verheugt FW Aspirin plus coumarin versus aspirin alone in the prevention of reocclusion after fibrinolysis for acute myocardial infarction: results of the Antithrombotics in the Prevention of Reocclusion In Coronary Thrombolysis (APRICOT)-2 Trial. Circulation 2002;106:659-65 [12163424]

CARS (warafrin 3mg), 1997:

Randomised double-blind trial of fixed low-dose warfarin with aspirin after myocardial infarction. Coumadin Aspirin Reinfarction Study (CARS) Investigators. Lancet 1997;350:389-96 [9259652]

CARS (warfarin 1mg), 1997:

Randomised double-blind trial of fixed low-dose warfarin with aspirin after myocardial infarction. Coumadin Aspirin Reinfarction Study (CARS) Investigators. Lancet 1997;350:389-96 [9259652]

CHAMP, 2002:

Fiore LD, Ezekowitz MD, Brophy MT, Lu D, Sacco J, Peduzzi P Department of Veterans Affairs Cooperative Studies Program Clinical Trial comparing combined warfarin and aspirin with aspirin alone in survivors of acute myocardial infarction: primary results of the CHAMP study. Circulation 2002;105:557-63 [11827919]

LoWASA, 2004:

Herlitz J, Holm J, Peterson M, Karlson BW, Haglid Evander M, Erhardt L Effect of fixed low-dose warfarin added to aspirin in the long term after acute myocardial infarction; the LoWASA Study. Eur Heart J 2004;25:232-9 [14972424]

WARIS II (warfarin+ASA), 2002:

Hurlen M, Abdelnoor M, Smith P, Erikssen J, Arnesen H Warfarin, aspirin, or both after myocardial infarction. N Engl J Med 2002;347:969-74 [12324552]

Zibaeenezhad, 2004:

Zibaeenezhad MJ, Mowla A, Sorbi MH Warfarin and aspirin versus aspirin alone in patients with acute myocardial infarction: a pilot study. Angiology 2004;55:17-20 [14759085]

Williams, 1997:

Williams MJ, Morison IM, Parker JH, Stewart RA Progression of the culprit lesion in unstable coronary artery disease with warfarin and aspirin versus aspirin alone: preliminary study. J Am Coll Cardiol 1997;30:364-9 [9247506]

WARIS II (warfarin alone), 2002:

Hurlen M, Abdelnoor M, Smith P, Erikssen J, Arnesen H Warfarin, aspirin, or both after myocardial infarction. N Engl J Med 2002;347:969-74 [12324552]

2 post stroke

Trial	Treatments	Patients	Trials design and methods
warfarin vs aspirin			
SWAT , 1998 n=NA follow-up: 2 years	warfarin (INR 2.0 to 3.0) versus Enteric-coated aspirin 650 mg 12-hourly	-	Parallel groups open USA

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More details and results :

- anticoagulant for post stroke in all type of patients at <http://www.trialresultscenter.org/go-Q413>

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SWAT, 1998:

Stewart B, Shuaib F, Veloso F. Stroke Prevention with Warfarin or Aspirin Trial (SWAT) Stroke 1998;29:304.

3 post myocardial infarction

Trial	Treatments	Patients	Trials design and methods
warfarin vs control (on top of aspirin)			
WARIS , 1999 n=1208/1206 follow-up: 65279;37 months	warfarin 2.84.8 versus placebo	survivors of acute myocardial infarction	Parallel groups double blind

continued...

Trial	Treatments	Patients	Trials design and methods
APRICOT-2 , 2002 n=135/139 follow-up: 3 months	moderate-intensity coumarin target INR 2-3 (+aspirin) versus aspirin	Acute MI after thrombolytics	Parallel groups open the Netherlands
CARS (warafirin 3mg) , 1997 n=5410/3393 follow-up: 14 months	warfarin fixed dose 3mg/d + 80 mg ASA versus aspirin 160 mg/d	AMI	Parallel groups double blind North America
CARS (warfarin 1mg) , 1997 n=2028/3393 follow-up: 14 months	warfarin 1mg/d + aspirin 80mg/d versus aspirin 160 mg/d	patients who had had myocardial infarction	Parallel groups double blind North America
CHAMP , 2002 n=2522/2537 follow-up: 2.7 years	warfarin target INR 1.5-2.5 + aspirin 81 mg daily versus aspirin 162 mg/d	AMI (patients enrolled within 14 days of infarction)	Parallel groups open US
LoWASA , 2004 n=1659/1641 follow-up: 5 years	warfarin fixed dose 1.25mg/d + ASA 75mg/d versus aspirin alone	AMI	Parallel groups open Sweden
WARIS II (warfarin+ASA) , 2002 n=4927/4669 follow-up: 4 years	warfarin target INR 2-2.5 +ASA 75mg/d versus ASA 160mg/d	patients hospitalized for acute myocardial infarction	Parallel groups open Norway
Zibaeenezhad , 2004 n=70/70 follow-up: 1 year	Warfarin target INR 65279;23 +aspirin versus aspirin 100 mg/day	Acute MI	Parallel groups open
warfarin vs placebo (on top of aspirin)			
Williams , 1997 n=6/5 follow-up: 2.5 months	warfarin target INR 65279;22.5 +aspirin versus placebo +aspirin	Acute MI, unstable angina	Parallel groups double blind
warfarin vs aspirin			
WARIS II (warfarin alone) , 2002 n=1216/1206 follow-up: 48 months	warfarin target INR 2.8-4.2 versus ASA 160mg/d	patients hospitalized for acute myocardial infarction	Parallel groups NA Norway

More details and results :

- anticoagulant for post myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q173>

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Smith P, Arnesen H, Holme I The effect of warfarin on mortality and reinfarction after myocardial infarction. N Engl J Med 1990;323:147-52 [[2194126](#)]

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Brouwer MA, van den Bergh PJ, Aengevaeren WR, Veen G, Luijten HE, Hertzberger DP, van Boven AJ, Vromans RP, Uijen GJ, Verheugt FW Aspirin plus coumarin versus aspirin alone in the prevention of reocclusion after fibrinolysis for acute myocardial infarction: results of the Antithrombotics in the Prevention of Reocclusion In Coronary Thrombolysis (APRICOT)-2 Trial. Circulation 2002;106:659-65 [[12163424](#)]

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CARS (warfarin 1mg), 1997:

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CHAMP, 2002:

Fiore LD, Ezekowitz MD, Brophy MT, Lu D, Sacco J, Peduzzi P Department of Veterans Affairs Cooperative Studies Program Clinical Trial comparing combined warfarin and aspirin with aspirin alone in survivors of acute myocardial infarction: primary results of the CHAMP study. Circulation 2002;105:557-63 [[11827919](#)]

LoWASA, 2004:

Herlitz J, Holm J, Peterson M, Karlson BW, Haglid Evander M, Erhardt L Effect of fixed low-dose warfarin added to aspirin in the long term after acute myocardial infarction; the LoWASA Study. Eur Heart J 2004;25:232-9 [[14972424](#)]

WARIS II (warfarin+ASA), 2002:

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Zibaeenezhad MJ, Mowla A, Sorbi MH Warfarin and aspirin versus aspirin alone in patients with acute myocardial infarction: a pilot study. Angiology 2004;55:17-20 [[14759085](#)]

Williams, 1997:

Williams MJ, Morison IM, Parker JH, Stewart RA Progression of the culprit lesion in unstable coronary artery disease with warfarin and aspirin versus aspirin alone: preliminary study. J Am Coll Cardiol 1997;30:364-9 [[9247506](#)]

WARIS II (warfarin alone), 2002:

Hurlen M, Abdelnoor M, Smith P, Erikssen J, Arnesen H Warfarin, aspirin, or both after myocardial infarction. N Engl J Med 2002;347:969-74 [[12324552](#)]

4 cardiovascular prevention

Trial	Treatments	Patients	Trials design and methods
warfarin vs placebo			
Thrombosis Prevention trial (Warfarin) , 1998 [NCT00000614] n=2762/2737 follow-up: median 6.8 y	warfarin started at 2.5mg/d adjusted for a target INR 1.5 versus placebo	men aged between 45 years and 69 years at high risk of IHD	Factorial plan double blind UK
WARIS , 1990 n=607/607 follow-up: 37 months	warfarin versus placebo	patients who had recovered from acute myocardial infarction (mean interval from the onset of symptoms to randomization, 27 days)	double-blind
warfarin + aspirin vs placebo			
Thrombosis Prevention trial (W plus A) , 1998 [NCT00000614] n=1277/1272 follow-up: median 6.8 y	warfarin adjusted dose for INR of 1.5 + aspirin 75 mg daily versus placebo	men aged between 45 years and 69 years at high risk of IHD	NA double blind UK

More details and results :

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- antithrombotics for cardiovascular prevention in patient at high risk at <http://www.trialresultscenter.org/go-Q120>
- antithrombotics for cardiovascular prevention in all type of patients at <http://www.trialresultscenter.org/go-Q132>
- antithrombotics for cardiovascular prevention in primary prevention at <http://www.trialresultscenter.org/go-Q437>
- anticoagulant for cardiovascular prevention in secondary prevention at <http://www.trialresultscenter.org/go-Q481>

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Thrombosis Prevention trial (Warfarin), 1998:

Thrombosis prevention trial: randomised trial of low-intensity oral anticoagulation with warfarin and low-dose aspirin in the primary prevention of ischaemic heart disease in men at increased risk. The Medical Research Council's General Practice Research Framework. *Lancet* 1998;351:233-41 [9457092]

Meade TW, Wilkes HC, Stirling Y, Brennan PJ, Kelleher C, Browne W Randomized controlled trial of low dose warfarin in the primary prevention of ischaemic heart disease in men at high risk: design and pilot study. *Eur Heart J* 1988;9:836-43 [3053176]

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Meade TW, Wilkes HC, Stirling Y, Brennan PJ, Kelleher C, Browne W Randomized controlled trial of low dose warfarin in the primary prevention of ischaemic heart disease in men at high risk: design and pilot study. Eur Heart J 1988;9:836-43 [3053176]

5 heart failure

Trial	Treatments	Patients	Trials design and methods
warfarin vs no treatment			
WASH (warfarin) , 2004 n=89/99 follow-up: 27 months	warfarin (target INR 2.5) versus no treatment	patients with heart failure and left ventricular systolic dysfunction requiring diuretic therapy with LVEF ≤35%	Parallel groups open UK, US
warfarin vs placebo			
HELAS (warfarin vs placebo) , 2006 n=38/44 follow-up: 21.9 months	warfarin (target INR of 23) versus placebo	HF due to dilated cardiomyopathy	Parallel groups double blind Europe
Barzizza (warfarin) , 1993 n=24/23 follow-up: 6 months	warfarin to maintain INR between 2 and 3 versus placebo	patients with dilated cardiomyopathy and evidence of intraventricular thrombi	NA
warfarin vs aspirin			
HELAS (warfarin vs aspirin) , 2006 n=54/61 follow-up: 21.9 months	warfarin versus aspirin 325mg/d	HF related to ischemic heart disease with LVEF <35%	Parallel groups Double blind Europe
WATCH (warfarin vs aspirin) , 2009 [NCT00007683] n=540/523 follow-up:	warfarin (target INR 2.5-3.0) versus aspirin 162 mg daily	symptomatic heart failure patients in sinus rhythm with ejection fractions ≥35% taking angiotensin-converting enzyme inhibitors (unless not tolerated) and diuretics	Parallel groups open

More details and results :

- antithrombotics for heart failure in all type of patients at <http://www.trialresultscenter.org/go-Q73>

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WASH (warfarin), 2004:

Cleland JG, Findlay I, Jafri S, Sutton G, Falk R, Bulpitt C, Prentice C, Ford I, Trainer A, Poole-Wilson PA, The Warfarin/Aspirin Study in Heart failure (WASH): a randomized trial comparing antithrombotic strategies for patients with heart failure. *Am Heart J* 2004;148:157-64. [[15215806](#)] [10.1016/j.ahj.2004.03.010](#)

HELAS (warfarin vs placebo), 2006:

Cokkinos DV, Haralabopoulos GC, Kostis JB, Toutouzas PK Efficacy of antithrombotic therapy in chronic heart failure: the HELAS study. *Eur J Heart Fail* 2006 Jun;8:428-32 [[16737850](#)]

Barzizza (warfarin), 1993:

Barzizza F, Zocchi MT, Magnani L.p, imag Antiplatelet drugs versus warfarin in treatment of intraventricular thrombi *Eur Heart J* 1993;14(suppl):396 (Abstract P2118)

HELAS (warfarin vs aspirin), 2006:

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WATCH (warfarin vs aspirin), 2009:

Massie BM, Krol WF, Ammon SE, Armstrong PW, Cleland JG, Collins JF, Ezekowitz M, Jafri SM, O'Connor CM, Packer M, Schulman KA, Teo K, Warren S, The Warfarin and Antiplatelet Therapy in Heart Failure trial (WATCH): rationale, design, and baseline patient characteristics. *J Card Fail* 2004;10:101-12. [[15101020](#)]

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6 atrial fibrillation

Trial	Treatments	Patients	Trials design and methods
warfarin low dose vs control			
BAATAF (warfarin vs no treatment) , 1990 [NCT00000517] n=212/208 follow-up: 2.2 years	warfarin low dose (target INR:1.5-2.7) versus no placebo.people received no treatment but could choose to take aspirin.	non rheumatic AF	Parallel groups Open
warfarin low dose + aspirin vs control			
SAFT(warfarin low dose + aspirin vs no treatment) , 2003 n=334/334 follow-up: 33 months	warfarin low dose (1.25 mg/d) + aspirin 75 mg/d versus no treatment	Low-medium risk patients with non valvular atrial fibrillation.	Parallel groups Open Sweden
warfarin standard dose vs control			

continued...

Trial	Treatments	Patients	Trials design and methods
AFASAK (warfarin standard dose vs control) , 1989 n=335/336 follow-up: 2 years	warfarin standard dose(target INR:2.8-4.2) versus control	chronic non rheumatic AF	Parallel groups Open Denmark
SPAF (warfarin standard dose) , 1991 n=210/211 follow-up: 1.3 years	warfarin standard dose(target INR:2.0-4.5) versus control	-	Parallel groups Open USA
warfarin low dose vs placebo			
SPINAF (warfarin vs placebo) , 1992 n=260/265 follow-up: 1.75 years	warfarin low dose(target INR 1.4-2.8) versus placebo	men ,with chronic nonrheumatic atrial fibrillation	Parallel groups Double blind usa
warfarin standard dose vs placebo			
CAFA , 1991 n=187/191 follow-up: 15.2 months	warfarin standard dose (target INR 2-3) versus placebo	non rheumatic atrial fibrillation	Parallel groups Double blind canada
warfarin + aspirin vs warfarin standard dose			
AFASAK II (warfarin low dose+aspirin vs warfarin standard dose) , 1998 n=171/170 follow-up: 3.5 years	warfarin fixed low dose(1.25mg/d) + aspirin(300mg/d) versus warfarin standard dose(target INR 2.0-3.0)	chronic non valvular atrial fibrillation	Parallel groups Open Denmark
SPAF III , 1996 n=521/523 follow-up: 1.1 years	warfarin low dose(target INR 1.2-1.5)+ aspirin 325 mg/d versus warfarin standard dose(target INR 2.0-3.0)	non rheumatic atrial fibrillation,patients with at least one additional thromboembolic risk factor(high risk patients)	Parallel groups Open USA,Canada
warfarin low dose vs warfarin standard dose			
AFASAK II (warfarin low dose vs warfarin standard dose) , 1998 n=167/170 follow-up: 3.5 years	warfarin fixed low dose (1.25 mg/d) versus warfarin standard dose(target INR 2-3)	chronic non valvular atrial fibrillation	Parallel groups Open Denmark
MWNAF , 1998 n=150/153 follow-up: 14.5 months	warfarin low dose (1.25mg/d) versus warfarin standard dose(target INR 2.0-3.0)	Patients over 60 with non rheumatic atrial fibrillation	Parallel groups Open Italy

More details and results :

- antithrombotics for atrial fibrillation in primary prevention of thromboembolic events at <http://www.trialresultscenter.org/go-Q57>

References

BAATAF (warfarin vs no treatment), 1990:

The effect of low-dose warfarin on the risk of stroke in patients with nonrheumatic atrial fibrillation. The Boston Area Anticoagulation Trial for Atrial Fibrillation Investigators N Engl J Med. 1990 Nov 29;323(22):1505-11 [2233931]

SAFT(warfarin low dose + aspirin vs no treatment), 2003:

Edvardsson N, Juul-Moller S, Omblus R, Pehrsson K Effects of low-dose warfarin and aspirin versus no treatment on stroke in a medium-risk patient population with atrial fibrillation. J Intern Med 2003 Jul;254:95-101 [12823646]

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AFASAK (warfarin standard dose vs control), 1989:

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Ezekowitz MD, Bridgers SL, James KE, Carliner NH, Colling CL, Gornick CC, Krause-Steinrauf H, Kurtzke JF, Nazarian SM, Radford MJ Warfarin in the prevention of stroke associated with nonrheumatic atrial fibrillation. Veterans Affairs Stroke Prevention in Nonrheumatic Atrial Fibrillation Investigators. N Engl J Med 1992 Nov 12;327:1406-12 [1406859]

CAFA, 1991:

Connolly SJ, Laupacis A, Gent M, Roberts RS, Cairns JA, Joyner C Canadian Atrial Fibrillation Anticoagulation (CAFA) Study. J Am Coll Cardiol 1991 Aug;18:349-55 [1856403]

AFASAK II (warfarin low dose+aspirin vs warfarin standard dose), 1998:

Gullov AL, Koefoed BG, Petersen P, Pedersen TS, Andersen ED, Godtfredsen J, Boysen G Fixed minidose warfarin and aspirin alone and in combination vs adjusted-dose warfarin for stroke prevention in atrial fibrillation: Second Copenhagen Atrial Fibrillation, Aspirin, and Anticoagulation Study. Arch Intern Med 1998 Jul 27;158:1513-21 [9679792]

SPAF III, 1996:

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MWNAF, 1998:

Pengo V, Zasso A, Barbero F, Banzato A, Nante G, Parissenti L, John N, Noventa F, Dalla Volta S Effectiveness of fixed minidose warfarin in the prevention of thromboembolism and vascular death in nonrheumatic atrial fibrillation. Am J Cardiol 1998 Aug 15;82:433-7 [9723629]

7 acute coronary syndrome

Trial	Treatments	Patients	Trials design and methods
UFH, warfarin vs control (on top of aspirin)			
ATACS (Cohen) , 1994 n=105/109 follow-up: 12 weeks	aspirin 162.5 mg daily plus heparin (activated partial thromboplastin time, two times control) followed by aspirin 162.5 mg daily plus warfarin (international normalized ratio, 2 to 3) for 12 weeks. versus aspirin alone (162.5 mg daily) for 12 weeks.	patients with unstable rest angina or non-Q-wave myocardial infarction with last episode of pain within 48 hours of randomization and who were nonprior aspirin users	Parallel groups single blind
Cohen (ATACS pilot) (heparin+aspirin vs asp) , 1990 n=37/32 follow-up: 12 weeks	aspirin (80 mg/day) plus heparin and then warfarin versus aspirin (325 mg/day)	Patients between 21 and 75 years with unstable angina or non-Q-wave MI with last episode of pain within 48 hours of screening.	Parallel groups open
warfarin vs control (on top of aspirin)			
ATACS (pilot study) (warfarin vs control) , 1990 n=37/32 follow-up: 65279;3 months	heparin/warfarin target INR 65279;3-4.5 + aspirin versus aspirin alone	65279;UA, NSTEMI	open
ATACS , 1994 n=105/109 follow-up: 3 months	heparin/warfarin (INR median 2.3) + aspirin versus aspirin	UA, NSTEMI	open
CARS , 1997 n=5410/3393 follow-up: 14 months	warfarin (INR mean 1.5) (3 mg warfarin or 1 mg warfarin with 80 mg aspirin) versus aspirin 160 mg/d	AMI	
OASIS Pilot (phase 1) , 1998 n=155/154 follow-up: 6 months	warfarin 3mg/d for 6 months (INR mean 1.5) versus control	UA, NSTEMI	open

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Trial	Treatments	Patients	Trials design and methods
OASIS Pilot (phase 2) , 1998 n=98/99 follow-up: 3 months	warfarin adjusted dose (INR mean 2.3) for 3 months versus standard treatment	UA, NSTEMI	open
OASIS-2 Warfarin Substudy , 2001 n=1848/1864 follow-up: 5 months	warfarin target INR 65279;22.5 for 5 months +aspirin versus control	UA	open
APRICOT-2 , 2002 n=135/139 follow-up: 3 months	moderate-intensity coumarin target INR 2-3 (+aspirin) versus aspirin	STEMI	
CHAMP , 2002 n=2522/2537 follow-up: 2.7 years	-	AMI	
WARIS , 2002 n=1208/1206 follow-up: 4 years	-	AMI	
LoWASA , 2004 n=1659/1641 follow-up: 5 years	-	AMI	
Zibaenezhad , 2004 n=70/70 follow-up: 1 year	-	AMI	
warfarin vs placebo (on top of aspirin)			
Williams , 1997 n=29/28 follow-up: 2.5 months	warfarin target INR 65279;22.5 +aspirin versus placebo +aspirin	UA, AMI	double blind
Huyhn , 2001 n=44/46 follow-up: 1 year	warfarin adjusted dose for INR 22.5 +aspirin versus placebo +aspirin	UA, NSTEMI with prior CABG	double blind
UFH, warfarin vs aspirin			
Cohen (ATACS pilot) (heparin vs asp) , 1990 n=24/32 follow-up: 12 weeks	heparin followed by warfarin (without aspirin) versus aspirin 325 mg/day	Patients between 21 and 75 years with unstable angina or non-Q-wave MI with last episode of pain within 48 hours of screening	Parallel groups open
warfarin vs aspirin			

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Trial	Treatments	Patients	Trials design and methods
ATACS (pilot study) warfarin vs aspirin , 1990 n=24/32 follow-up: 65279;3 months	heparin/warfarin target INR 65279;3-4 versus aspirin 65279;325 mg daily	65279;UA, NSTEMI	open

More details and results :

- antithrombotics for acute coronary syndrome in all type of patients at <http://www.trialresultscenter.org/go-Q24>
- anticoagulant for acute coronary syndrome in All ACS (including AMI) at <http://www.trialresultscenter.org/go-Q167>
- anticoagulant for acute coronary syndrome in ACS (excluding AMI) at <http://www.trialresultscenter.org/go-Q168>
- heparin (UFH or LMWH) for acute coronary syndrome in all type of patients at <http://www.trialresultscenter.org/go-Q171>

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ATACS (Cohen), 1994:

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Cohen M, Adams PC, Hawkins L, Bach M, Fuster V Usefulness of antithrombotic therapy in resting angina pectoris or non-Q-wave myocardial infarction in preventing death and myocardial infarction (a pilot study from the Antithrombotic Therapy in Acute Coronary Syndromes Study Group). Am J Cardiol 1990;66:1287-92 [2244556]

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Cohen M, Adams PC, Parry G, Xiong J, Chamberlain D, Wieczorek I, Fox KA, Chesebro JH, Strain J, Keller C Combination antithrombotic therapy in unstable rest angina and non-Q-wave infarction in nonprior aspirin users. Primary end points analysis from the ATACS trial. Antithrombotic Therapy in Acute Coronary Syndromes Research Group. Circulation 1994;89:81-8 [8281698]

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8 DVT prophylaxis

Trial	Treatments	Patients	Trials design and methods
Warfarin vs no treatment			
Pinto , 1970 n=25/25 follow-up: >3 weeks	Warfarin versus No treatment	Hip surgery	Open
Hume , 1973 n=17/19 follow-up: Discharge	Warfarin versus No treatment	THR	Open
Morris , 1976 n=80/80 follow-up: 3 months	Warfarin versus No treatment	HFS	Open
Powers , 1989 n=65/63 follow-up: 3 months	Warfarin versus No treatment	HFS	Open
Warfarin vs placebo			
Myrhe , 1969 n=50/55 follow-up: 3 weeks	Wwarfarin versus Placebo	HFS	double blind
Warfarin vs Ardeparin			
RD Heparin , 1994 n=403/770 follow-up: 3 months	Warfarin versus Ardeparin 50 anti-Xa IU /kg or 90 anti-Xa IU /kg x1	THR or TKR	Open
Heit , 1997 n=279/554 follow-up: Days 514	Warfarin versus Ardeparin 25, 35, 50 anti-Xa U /kg x2	TKR	double blind
Warfarin vs Aspirin			
Lotke , 1997 n=146/166 follow-up: 6 months	Warfarin versus Aspirin 325 mg x2	THR or TKR (stratified)	Open
Powers , 1989 n=65/66 follow-up: 3 months	Warfarin versus Aspirin 650 mg x2	HFS	Open
Warfarin vs Dalteparin			
Francis , 1997 n=292/288 follow-up: Day 7 2	Warfarin versus Dalteparin 5000 anti-Xa IU x1	THR	Open

continued...

Trial	Treatments	Patients	Trials design and methods
Hull , 2000 n=489/983 follow-up: Day 6 2	Warfarin versus Dalteparin 5000 anti-Xa IU x1	THR	double blind
Warfarin vs Danaparoid			
Gerhart , 1991 n=131/132 follow-up: 9 days	Warfarin versus Danaparoid 750 U x2	HFS	Open
van Comp , 1998 n=247/241 follow-up: 3 months	Warfarin versus Danaparoid 750 U x2	THR	Open
Warfarin vs Dextran			
Harris , 1972 n=114/113 follow-up: NA	Warfarin versus Dextran 40	THR	Open
Barber , 1977 n=58/51 follow-up: 1114 days	Warfarin versus Dextran 70	THR	Open
Francis , 1983 n=57/43 follow-up: 57 days	Warfarin versus Dextran 40	THR or TKR (stratified)65279;	Open
Myrhe , 1969 n=50/55 follow-up: 3 weeks	Warfarin versus Dextran 70	HFS	double blind
Warfarin vs Enoxaparin			
Leclerc , 1996 n=334/336 follow-up: 6 months	Warfarin versus Enoxaparin 30 mg x2	TKR	double blind
Colwell , 1999 n=1495/1516 follow-up: 3 months	Warfarin versus Enoxaparin 30 mg x2	THR	Open
Fitzgerald , 2001 n=176/173 follow-up: 3 weeks	Warfarin versus Enoxaparin 30 mg x2	TKR	Open
Warfarin vs Intermittent pneumatic compression			
Francis , 1992 n=103/98 follow-up: 68 days	Warfarin versus IPC	THR	Open

continued...

Trial	Treatments	Patients	Trials design and methods
Paiement , 1987 n=80/83 follow-up: 12 days	Warfarin versus IPC	THR	Open
Bailey , 1991 n=45/50 follow-up: 57 days	Warfarin versus IPC	THR	Open
Kaempffe , 1991 n=52/48 follow-up: At least 2 months	Warfarin versus IPC	THR or TKR (stratified)	Open
Warfarin vs Logiparin			
Hull , 1993 n=721/715 follow-up: 65279;Day 14 or discharge	Warfarin versus Logiparin 75 anti-Xa IU /kg x1	65279;THR or TKR (stratified)	double blind
Warfarin vs Sudoxicam			
Hume , 1973 n=52/51 follow-up: Discharge	Warfarin versus Sudoxicam	THR	single blind
Warfarin vs unfractionated heparin			
Hume , 1973 n=17/18 follow-up: Discharge	Warfarin versus UFH 5000 x3	THR	Open
Barber , 1977 n=58/19 follow-up: 1114 days	Warfarin versus UFH 5000 x2	THR	Open

More details and results :

- antithrombotics for DVT prophylaxis in orthopedic surgery at <http://www.trialresultscenter.org/go-Q37>
- anticoagulant for DVT prophylaxis in orthopedic surgery at <http://www.trialresultscenter.org/go-Q184>

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9 venous thrombosis

Trial	Treatments	Patients	Trials design and methods
warfarin vs control			
Vitotec , 2009 n=27/25 follow-up:	continuation of warfarin for another 6 months versus discontinuation of warfarin	patients with idiopathic DVT After 6 months of standard therapy (heparin/LMWH, warfarin with target INR 2-3) and persistent echogenic masses of over 20% of venous diameter	
warfarin vs discontinuation			
PROLONG (Palareti) , 2006 [NCT00264277] n=105/122 follow-up: 1.4 yeras	prolongation versus no anticoagulation	patients with an abnormal d-dimer level 1 month after the discontinuation of anticoagulation in patients with a first unprovoked proximal deep-vein thrombosis or pulmonary embolism who had received a vitamin K antagonist for at least 3 months	Parallel groups
PREVENT (Ridker) , 2003 n=255/253 follow-up: 2.1 years	extension with low-intensity warfarin (target INR, 1.5 to 2.0) versus placebo	Patients with idiopathic venous thromboembolism who had received full-dose anticoagulation therapy for a median of 6.5 months	Parallel groups
Agnelli , 2003 n=NA follow-up: 33 months	continuation for 3 or 9 additionnal months of warfarin or other oral anticoagulant was adjusted to achieve a target INR between 2.0 and 3.0. versus discontinuation (after 3 months)	patients who had had 3 months of oral anticoagulant therapy without experiencing recurrence or bleeding after a first episode of pulmonary embolism	Parallel groups open Italy

continued...

Trial	Treatments	Patients	Trials design and methods
Agnelli , 2001 n=NA follow-up: 33 months	continuation for 9 additional months; warfarin or acenocoumarol adjusted to achieve a target INR between 2.0 and 3.0 versus discontinuation (after 3 months months)	Patients with a first episode of idiopathic proximal deep venous thrombosis who had completed three months of oral anticoagulant therapy	Parallel groups open Italy
LAFIT (Kearon) , 1999 n=NA follow-up:	Continuation of the oral anticoagulant therapy up to 24 months, warfarin was adjusted to achieve a target INR between 2.0 and 3.0. versus discontinuation (after 3 months)	patients who had completed 3 months of anticoagulant therapy for a first episode of idiopathic venous thromboembolism	
ELAET (Kearon) , 2004 n=NA follow-up: 11 months (after randomizatio)	continuation for 2 additionnal months of warfarin adjusted to achieve a target INR between 2.0 and 3.0. versus discontinuation (after 1 months)	-	Parallel groups double blind Canada, US
Levine , 1995 n=NA follow-up: 11 months after randomization.	continuation for 2 months of warfarin adjusted INR value of 2.0 to 3.0 versus Discontinue oral anticoagulant therapy (after 1 months)	Patients with venographically confirmed acute proximal DVT who had received four weeks of warfarin after initial heparin and whose four week IPG was normal	Parallel groups double blind Canada, Italy
DURAC (Schulman) , 1997 n=NA follow-up: Four years after randomization	indefinite warfarin or dicoumarol adjusted for a target INR between 2.0 and 2.85 versus 6 months warfarin or dicoumarol adjusted for a target INR between 2.0 and 2.85	-	Parallel groups open Sweden
warfarin vs low intensity warfarin			
ELATE , 2003 n=369/369 follow-up: 2.4 years mean	continue warfarin therapy with a target international normalized ratio (INR) of 2.0 to 3.0 versus target INR of 1.5 to 1.9 (low intensity)	patients who had completed three or more months of warfarin therapy for unprovoked venous thromboembolism	Parallel groups open-label
heparin+warfarin vs placebo			
Ott import , 1998 n=11/12	anticoagulants (s.c. heparin followed by oral warfarin) (duration NA) versus s.c. saline followed by oral placebo tablets	-	double blind Denmark
low-intensity warfarin vs placebo			

continued...

Trial	Treatments	Patients	Trials design and methods
PREVENT , 2003 n=255/253 follow-up: 2.1 years mean	low-intensity warfarin (target INR, 1.5 to 2.0) versus placebo	Patients with idiopathic venous thromboembolism who had received full-dose anticoagulation	double-blind
warfarin vs placebo			
LAFIT , 1999 n=79/83 follow-up: 10 months	warfarin for a further 24 months versus placebo	patients who had completed 3 months of anticoagulant therapy for a first episode of idiopathic venous thromboembolism	double-blind
Levine , 1995 n=109/105 follow-up:	continue warfarin (targeted International Normalized Ratio 2.0 to 3.0) for a further eight weeks versus placebo	Patients with venographically confirmed acute proximal DVT who had received four weeks of warfarin after initial heparin and whose four week IPG was normal	

More details and results :

- antithrombotics for venous thrombosis in all type of patients at <http://www.trialresultscenter.org/go-Q101>
- antithrombotics for venous thrombosis in secondary prevention of VTE at <http://www.trialresultscenter.org/go-Q149>
- heparin (UFH or LMWH) for venous thrombosis in all type of patients at <http://www.trialresultscenter.org/go-Q204>
- antithrombotics for venous thrombosis in secondary prevention - 2 at <http://www.trialresultscenter.org/go-Q682>

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10 coronary artery disease

Trial	Treatments	Patients	Trials design and methods
warfarin vs placebo			
WARIS , 1990 n=607/607 follow-up: 37 months	warfarin versus placebo	patients who had recovered from acute myocardial infarction (mean interval from the onset of symptoms to randomization, 27 days)	double-blind

More details and results :

- anticoagulant for coronary artery disease in all type of patients at <http://www.trialresultscenter.org/go-Q673>

References

WARIS, 1990:

Smith P, Arnesen H, Holme I The effect of warfarin on mortality and reinfarction after myocardial infarction. *N Engl J Med* 1990;323:147-52 [2194126]

11 peripheral vascular diseases

Trial	Treatments	Patients	Trials design and methods
warfarin vs contrle			
Sarac , 1998 n=32/24 follow-up: 3 ans	hparine (6 24 h avant l'intervention) puis warfarin pour un INR entre 2 et 3. versus pas d'anti-coagulation	AOMI stade non precis	Parallel groups Ouvert
Johnson , 2002 n=308/306 follow-up: 5 ans	warfarin 5 mg/j au 2me ou 3me j post-opratoire. INR cible : 1.4 2.8 versus contrle	stades II IV 614 patients inclus	Parallel groups Ouvert

More details and results :

- antithrombotics for peripheral vascular diseases in after revascularisation at <http://www.trialresultscenter.org/go-Q661>

- anticoagulant for peripheral vascular diseases in after revascularisation at <http://www.trialresultscenter.org/go-Q662>

References

Sarac, 1998:

Warfarin improves the outcome of infrainguinal vein bypass grafting at high risk for failure. Sarac TP, Huber TS, Back MR, Ozaki CK, Carlton LM, Flynn TC, Seeger JM J Vasc Surg 1998 Sep;28:446-57 [[9737454](#)]

Johnson, 2002:

Benefits, morbidity, and mortality associated with long-term administration of oral anticoagulant therapy to patients with peripheral arterial bypass procedures: a prospective randomized study. Johnson WC, Williford WO; Department of Veterans Affairs Cooperative Study 362 J Vasc Surg 2002 Mar;35:413-21 [[11877686](#)]

Entry terms: heparin, Heparin, Unfractionated Heparin, Heparinic Acid, Liquaemin, Sodium Heparin, Heparin Sodium, alpha-Heparin, alpha Heparin, , UFH