# **Subject Index: Abstracts**

## Ablation procedures

See also Lasers: Rotablation; Surgery, ablation Ablation of canine ventricular myocardium with a cryogenic catheter: a new closed-chest ablative technique, 186A

Attempted ablation of left sided accessory pathways by radiofrequency current, 168A

Autonomic influence on ventricular subsidiary pacemakers; a study of patients post AV nodal ablation, 232A

Catheter ablation of a posteroseptal accessory atrioventricular connection in forty-two patients, 169A

Catheter ablation of the atrioventricular junction using radiofrequency energy, 169A

Catheter modification of AV nodal conduction in drug resistant AV nodal reentrant tachycardia (AVNRT), 176A

Catheter modification of the atrioventricular node: a potential cure for atrioventricular nodal reentrant tachycardia, 168A

Comparative effects of radiofrequency and laser ablation in normal and diseased ventricular myocardium, 175A

Direct entrainment guided ablation of the slow conduction zone (SCZ) in human type I atrial flutter (AF), 168A

Effect of epicardial accessory pathway ablation or endocardial dissection for AV nodal reentrant tachycardia on vagal innervation of the AV node, 232A

Effects of low energy direct current countershock on atrioventricular nodal junction in dog using suction-ablation catheter, 176A

Electrophysiologic effects of argon laser irradiation during intraoperative atrioventricular node or accessory pathway ablation in man, 169A

Phase image triangulation of accessory pathways in patients undergoing catheter ablation of posteroseptal pathways, 168A

Radiofrequency or direct current for ablation of ventricular tachycardia?, 176A

Successful radiofrequency catheter ablation of right anteroseptal accessory atrioventricular connections, 176A

Temperature-guided radiofrequency coagulation of myocardial tissue, 169A

#### Acceleration

Low maximum acceleration measured using aortic Doppler identifies patients at risk of cardiac death following acute myocardial infarction, 157A

#### Accessory pathways

See also Ablation procedures; Surgery, ablation; Wolff-Parkinson-White syndrome

Antegrade and retrograde conduction occurring over separate, adjacent accessory AV pathways, 173A Effects of upright posture on atrioventricular accessory pathway conduction, 205A

Noninvasive localization of accessory pathways, 8A

Retrograde pathway in atrioventricular nodal tachycardias: nodal tissue or extranodal accessory pathway?, 175A

#### Acetylcholine

Acetylcholine causes vasoconstriction in pre-contracted human coronary arteries in vivo, 85A

Acetylcholine is a potent vasoconstrictor in human coronary arteries early after cardiac transplantation, 85A

Comparison of acetylcholine and ergonovine in the provocation of coronary vasospasm, 132A

Contrasting effects of acetylcholine on coronary conductance and resistance vessels in patients with coronary artery disease, 133A

Coronary occlusion-reperfusion attenuates endothelium-mediated vascular response to leukotriene D<sub>4</sub> and acetylcholine, 143A

Effect of oral administration of antihypertensive agents on endothelium dependent and endothelium independent vascular relaxation, 83A

Endothelial function influences the coronary vasomotor response to sympathetic stimulation in man, 202A

Genetically induced atherosclerosis attenuates endothelially mediated relaxation, 32A

Preserved flow-mediated vasodilation despite acetylcholine-induced vasoconstriction in atherosclerotic coronary arteries in man, 132A

#### Action potentials

Effects of flecainide on action potential duration of human arterial fibers, 140A

Frequency response of action potentials from human myocardium, 185A

Synergistic actions of disopyramide and lidocaine on Vmax of action potentials in guinea pig papillary muscles, 139A

#### Adenosino

Adenosine thallium-201 scintigraphy: feasibility, safety and initial results in man, 161A

Anti-adrenergic action of adenosine in a canine model of chronic myocardial infarction, 139A

Effects of adenosine on the coronary circulation in man, 132A

Electrophysiologic effects of adenosine following orthotopic cardiac transplantation: evidence of supersensitivity, 163A

Reduced myocardial blood flow with persistent vasodilator reserve: role of adrenergic activation, 187A

Safety, efficacy and predictive value of drug termination of ventricular tachycardia, 162A Termination of epinephrine-induced ventricular tachycardia by adenosine in halothane-anesthetized dogs, 249A

## Adenosine diphosphate

Estimation of the concentration and function of the ADP/ATP carrier in the myocardium of patients with dilated cardiomyopathy (DCM), 251A

#### Adenosine receptors

Blockade of adenosine receptors with aminophylline: effects on exercise capacity in stable angina, 41A

#### Adenosine triphosphate

Does acute pharmacologic stimulation of stunned myocardium have chronic deleterious effects?, 219A

Estimation of the concentration and function of the ADP/ATP carrier in the myocardium of patients with dilated cardiomyopathy (DCM), 251A

# Adenyl cyclase

Ischemic ventricular fibrillation is distinguished by preserved histamine-stimulated adenyl cyclase activity, 90A

#### Adenylate cyclase

Alterations in the catalyst of adenylate cyclase and the inhibitory guanine nucleotide regulatory protein in experimental heart failure, 179A

## Adrenaline

Cardiovascular hormones in relation to mortality in severe heart failure, 246A

## Adrenergic response

Decreased adrenergic response in hypertensive patients without left ventricular hypertrophy, 82A

Enhanced cardiac adrenergic response in cardiomyopathic hamster at a pre-congestive failure stage, 87A

Hemodynamic correlates of increased cardiac adrenergic drive in the intact failing human heart, 245A

#### Adriamycii

Use of enoximone in cardiac transplant candidates: effect on  $\beta$  adrenergic receptors, 248A

#### Afterdepolarizations

Simultaneous demonstration of early- and delayed afterdepolarizations in Ca<sup>2</sup> loaded cardiac cells, 185A

#### Afterrepolarizations

Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil and class I agents, 249A

#### Age factors

See also Elderly

Age-related changes in left ventricular performance during isometric exercise, 56A

Aging-related decrease in vasodilatory capacity in coronary microcirculation estimated by Doppler catheter, 57A

- Age related risk factors and mechanisms of death following myocardial infarction. Experience from the Multicenter Diltiazem Postinfarction Trial, 27A
- Does age modify the hemodynamic and clinical response to converting-enzyme inhibitors in patients with chronic heart failure?, 57A
- Effect of age on pulmonary venous flow in normal subjects, 50A
- Exercise cardiac output declines with advancing age in normal subjects, 241A
- Improvement of relaxation velocity by calcium blocker in aging rabbit myocardium, 57A
- Site of age-related PR interval prolongation in normal subjects, 57A

#### Air transport

Is delivery of rt-PA by helicopter transport teams safe and time-effective?, 192A

### Albumin

Oxidation of sulfhydryl groups of serum albumin in coronary artery diseases, 44A

#### Alcohol

Myocardial IgA deposition: a possible marker for alcohol related myocardial disease, 254A

#### Aldosterone

Direct suppression of aldosterone secretion by endogenous atrial natriuretic peptide in hemodynamically normal man: evidence for physiologic role of ANP, 172A

## Alpha-adrenergic blocking agents

See also specific agent

Majority of physicians use drug therapy for isolated systolic hypertension, 13A

## Alpha adrenergic receptors

Hypoxia and glucose deprivation independently induce uncoupling of  $\alpha_1$ -adrenergic signal transduction in cultured myocardial cells, 252A

Role of  $\alpha$ -adrenergic receptors in syndrome X, 150A

## Alpha adrenergic tone

Reduced myocardial blood flow with persistent vasodilator reserve: role of adrenergic activation, 187A

# Alpha tocopherol

See also Vitamin E

Effect of  $\alpha$ -tocopherol (vitamin E) on regional function in stunned myocardium, 144A

# Aminophylline

Blockade of adenosine receptors with aminophylline: effects of exercise capacity on stable angina, 41A

Exercise capacity after acute aminophyline administration in patients with syndrome X, 202A

#### Amiodarone

Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil and class I agents, 249A

Automatic implantable cardioverterdefibrillator in patients with chronic amiodarone: effects on the defibrillation threshold and the rate of shocks, 177A

Chronic amiodarone administration protects against global myocardial ischemia in the rat, 250A

Differential effects of amiodarone on Vmax and

- conduction velocity in anisotropic myocardium, 139A
- Disparate effects of acute and chronic amiodarone on ventricular fibrillation threshold in dogs, 249A
- Etiology of polymorphic ventricular tachycardia in the absence of prolonged OT, 21A
- Fecal elimination of amiodarone and desethyl amiodarone, 186A
- Long-term followup of amiodarone in the young: continued efficacy, unimpaired growth, moderate side effects, 171A

#### Apaerobic threshold

Alterations in the ventilatory anaerobic threshold after a chronic intervention reflect changes in lactate production during exercise in heart failure, 39A

Temporal dissociation between invasive and non-invasive determination of anaerobic threshold in chronic heart failure, 39A

#### Anastomosis

Bidirectional cavo-pulmonary anastomosis, 74A

#### Aneurysm

Effect of reperfusion on post-myocardial infarction aneurysm formation at one week, 110A

Endocrine conversion of ventricular cardiocytes in ventricular aneurysm, 171A

Functional left ventricular aneurysm after anterior Q-wave myocardial infarction: incidence, contributing factors and natural history, 45A

Surgically resectable left ventricular aneurysm: specific characteristics by ultrafast computerized tomography, 47A

## Angina pectoris

See also Syndrome X

Antecedent angina: a clinical marker for patients at high risk following thrombolytic therapy, 28A

Blockade of adenosine receptors with aminophylline: effects on exercise capacity in stable angina, 41A

Epidural spinal stimulation in patients suffering from intractable angina, 46A

In-hospital angina with transient ECG changes predicts poor one-year survival only in patients with ST depression, 93A

Inability of thrombosis related markers to distinguish between unstable and stable angina pectoris, 15A

Intermittent urokinase therapy as a new strategy concept in untractable angina pectoris, 16A

Ischemic threshold varies in response to different types of exercise in patients with chronic stable angina, 237A

Overriding heightened risk, prior angina denotes a favorable response to myocardial reperfusion, 95A

Silent ischemia during daily life is an independent predictor of survival in stable angina. 3A

# Angina pectoris, unstable

Analysis of the ischemia related coronary artery and its predictive value in unstable angina, 238A

Effects of urokinase and heparin on lesion geometry in unstable angina, 15A

Impact of abnormal myocardial perfusion on ventricular function in patients with unstable angina, 239A

Importance of assessing ST elevation by Holter monitoring in unstable angina, 203A

Nifedipine in unstable angina: beneficial effects in the elderly and in patients with reduced left ventricular function, 239A

Patients with ST segment deviation and unstable angina have consistent increases in thrombin activity, 15A

Predicting longterm outcome in medically stabilized unstable angina: early Holter ST segment monitoring, predischarge exercise thallium scintigraphy and coronary angiography, 238A

Prediction and prevention of myocardial infarction during the acute phase of unstable angina, 192A

S.T.A.I. (Study of Ticlopidine in Unstable Angina), 238A

Thrombolytic therapy in unstable angina and non Q wave myocardial infarction: a randomized trial of urokinase versus aspirin, 15A

Tissue plasminogen activator for unstable angina pectoris: a multicenter, randomized, double-blind, placebo-controlled trial, 191A

## Angiography

See also Arteriography

Angiographic appearances following percutaneous coronary atherectomy, 223A

Angioscopy—more sensitive for identifying thrombus, distal emboli, and subintimal dissection, 146A

Colour flow imaging as intra-operative angiography in ventricular septal defects—advantages and pitfalls, 75A

Digital flashing tomosynthesis (DFTS)—an alternative to cine technique in coronary angiography, 8A

Does balloon inflation duration influence the angiographic results of coronary angioplasty?, 58A

Effect of x-ray dose on accuracy and precision of quantitative digital coronary angiography, 7A

Impact of compensatory enlargement of atherosclerotic coronary arteries on the angiographic assessment of coronary artery disease, 196A

New approach to in vivo measurement of coronary blood flow utilizing high-speed coronary angiography, 7A

Physiologic significance of coronary lesions assessed by exercise echocardiography and quantitative coronary angiography, 158A

Randomized trial of ionic versus non-ionic contrast for cardiac angiography: effect on complications and costs, 46A

rTPA versus rTPA plus PTCA in acute myocardial infarction: quantitative results of early and late coronary arteriography,

Single versus multiple balloon inflations in coronary angioplasty: late angiographic results and recurrence, 58A

#### Angiography, radionuclide

- Exercise radionuclide angiography yields prognostic information equivalent to cardiac catheterization, 126A
- Role of radionuclide angiography in selecting patients for coronary bypass surgery, 213A

## Angioplasty

- See also Lasers; Restenosis
- Coronary angioplasty dissection: in-hospital outcome, 221A
- Coronary angioplasty in patients with severe depression of left ventricular function, 222A
- Impedance measurement of absolute blood flow using angioplasty guidewire, 194A
- Patterns of dilation during coronary angioplasty, 58A
- Persistent endothelial dysfunction following experimental angioplasty, 195A
- Prolonged autoperfusion angioplasty: immediate clinical outcome and angiographic follow-up, 155A
- Radiofrequency thermal angioplasty for the treatment of peripheral vascular occlusive disease: preliminary results of a clinical trial, 14A
- Restenosis within coronary stents: possible effect of previous angioplasty, 107A
- Time course of improved function following post-infarction angioplasty: evidence for "hibernation" even in "infarcted" myocardium, 25A
- Ultrasonic angioplasty using a new flexible wire system, 4A

# Angioplasty, coronary

- Acute outcome and long term follow-up of patients with acute myocardial infarction and single vessel disease treated with angioplasty without thrombolytic therapy, 94A
- Acute thrombotic reocclusion after percutaneous transluminal coronary angioplasty—should thrombolysis be attempted?, 58A
- Cardiopulmonary bypass supported coronary angioplasty in inoperable patients, 53B
- Clinical safety and early course following prolonged inflations in elective transluminal coronary angioplasty, 43A
- Comparison of socio-economics and outcome after multivessel coronary angioplasty or bypass surgery, 230A
- Consequences of occlusion during PTCA: the 1985-86 NHLBI PTCA Registry, 230A
- Coronary atherectomy for the treatment of unfavorable PTCA lesions, 109A
- Determinants of arterial dissection during PTCA: lesion type versus inflation rate, 229A
- Determinants of improved global left ventricular function after tPA and deferred PTCA for acute MI, 92A
- Does balloon inflation duration influence the angiographic results of coronary angioplasty?, 58A
- Does the disadvantage of incomplete revascularization by coronary angioplasty increase with time?, 229A
- Early and late clinical outcome following

- successful coronary angioplasty of total coronary occlusions, 220A
- Effect of larger balloon size on recurrence after repeat coronary angioplasty due to restenosis, 208A
- Histopathologic phenomena at the site of percutaneous transluminal coronary angioplasty, 220A
- Internal mammary artery graft angioplasty: clinical and angiographic follow-up, 221A
- Intravenous nitroglycerin prevents coronary artery vasoconstriction after PTCA, 59A
- Late follow-up of 781 patients undergoing percutaneous transluminal coronary angioplasty (PTCA) or open heart surgery (OHS) for an isolated obstruction in the left anterior descending (LAD) coronary artery, 166A
- Long-term (4 year) follow-up after percutaneous transluminal coronary angioplasty during acute myocardial infarction, 94A
- Long-term improvement of left ventricular function after myocardial infarction with and without thrombolytic therapy by late PTCA of the infarct-related artery, 26A
- Percutaneous cardiopulmonary bypass to support high risk elective coronary angioplasty, 160A
- Percutaneous institution of cardiopulmonary (bypass) support: technique and complications, 159A
- Percutaneous transluminal angioplasty of internal mammary artery bypass grafts. 221A
- Percutaneous transluminal angioplasty of left internal mammary artery grafts using a femoral approach, 221A
- Recovery of regional myocardial function after successful coronary angioplasty early after non-Q-wave myocardial infarction, 7A
- "Rescue" percutaneous transluminal coronary angioplasty after failed thrombolytic therapy, 193A
- rTPA versus rTPA plus PTCA in acute myocardial infarction: Quantitative results of early and late coronary arteriography, 54A
- Single versus multiple balloon inflations in coronary angioplasty: late angiographic results and recurrence, 58A
- Supported angioplasty: initial experience with high risk patients, 159A
- TIMI II: a study of PTCA timing after rt-PA thrombolysis for acute myocardial infarction, 194A
- Transesophageal 2D color-coded Doppler echocardiography during percutaneous transluminal coronary angioplasty, 68A
- Two-year post-discharge survival after emergency coronary angioplasty for myocardial infarction: importance of the timing and success of angioplasty, 193A
- Vascular repair and remodeling using radiofrequency balloon angioplasty, 228A
- Verapamil as a potent cardioprotective agent for coronary angioplasty: first clinical experience, 154A

#### Angioscopy

Angioscopic endothelial macropathology in

- patients with acute coronary syndromes, 14A
- Angioscopy—more sensitive for identifying thrombus, distal emboli and subintimal dissection, 146A
- Detection of intravascular thrombus by high frequency intraluminal ultrasound angioscopy: in vitro and in vivo studies, 5A
- Intraluminal two-dimensional ultrasound angioscopic quantitation of arterial stenosis: comparison with external high-frequency ultrasound imaging and anatomy, 5A

#### Angiotensin II

Cardiotoxic effects of angiotensin II, 2A Cardiovascular hormones in relation to mortality in severe heart failure, 246A

#### Anisotrop

- Cytoplasmic and junctional components of anisotropic internal resistance in canine myocardium, 129A
- Differential effects of amiodarone on Vmax and conduction velocity in anisotropic myocardium, 139A
- Masking of tissue anisotropy—a computer model of the interaction between activation wavefront and fixed barriers, 129A

## Antiarrhythmic drug therapy

See also specific agent

- Does response to IA agents predict response to IC agents in patients with sustained ventricular tachycardia, 174A
- High incidence of remission in patients with incessant ventricular tachycardia discontinued from antiarrhythmic drugs, 33A
- Multiple morphologies of induced ventricular tachycardia: role of antiarrhythmic drugs and clinical implications, 20A
- Outcome of empirical antiarrhythmic drug therapy in matched cohorts of patients with ventricular arrhythmias after myocardial infarction, 173A
- Spontaneous variability in ventricular arrhythmias during chronic "effective" antiarrhythmic therapy, 33A
- Use-dependent prolongation of ventricular tachycardia cycle length by type IA and IC drugs, 21A

## Antibodies

See Autoantibodies; specific antibody

## Anticoagulants

See also specific agent

Patients with ST segment deviation and unstable angina have consistent increases in thrombin activity, 15A

#### Antigens

See Autoantigens; specific antigen

# $\alpha_2$ -Antiplasmin

Selective inhibition of  $\alpha_2$ -antiplasmin augments the potency and specificity of plasminogen activators, 2A

## Antiplatelet antibody

Antiplatelet antibody [7E3 F(ab')<sub>2</sub>] prevents rethrombosis after tissue-type plasminogen activator induced coronary artery thrombolysis in a canine model, 32A

#### Antithymocyte globulin

Prophylactic anti-rejection therapy early after cardiac transplantation: rate versus OKT3, 62A

#### Antitumor agents

Low dose of antitumor agents prevents smooth muscle cell proliferation after endothelial injury, 252A

#### Aortic arch obstruction

Surgical management of aortic arch obstruction and transposition of the great arteries, 120A

#### Aortic valve area

Gorlin formula for aortic valve orifice area validated in vitro, 73A

#### Aortic valve disease

- See also Stenosis; Surgery, valve; Valve disease
- Attenuation of early mitral flow velocity by acute aortic insufficiency, 210A
- Catheter balloon valvuloplasty of necropsy stenotic aortic valves: etiology of aortic stenosis is a major factor in early "restenosis", 16A
- Evaluation of aortic regurgitation by cine magnetic resonance imaging comparing cineangiography, 201A
- Follow-up balloon aortic valvuloplasty: results in 192 cases, 16A
- Hyperlipidemic valvulopathy; aortic regurgitation in familial hypercholesterolemia studies by color Doppler echocardiography, 73A
- Importance of contractility in determining left ventricular size and performance in patients, 71A
- Isolated quadricuspid aortic valves; incidence, description, and functional assessment,
- One-two year follow-up after primarily successful valvuloplasty for calcified aortic stenosis, 16A
- Quantification of acute aortic insufficiency with color Doppler flow mapping: in vitro studies in a flexible model of the left ventricle, 49A
- Suppression of cardiac protein degradation contributes to progressive hypertrophy due to aortic regurgitation, 71A
- Transesophageal echo, an improved diagnostic technique for sub-aortic membranes, 209A
- Ventricular septal defect with aortic regurgitation: a 35 year experience, 121A

#### APSAC

- Improvement of global and regional left ventricular function with intravenous APSAC in acute myocardial infarction.

  Results of a multicenter double blind trial, 26A
- Reduction of infarct size by intravenous APSAC in myocardial infarction (multicenter randomized trial vs. heparin), 95A

#### Arachidonic acid

Sarcolemmal phospholipid turnover: a critical mediator of myocardial injury, 252A

# Arginine vasopressin

- Effect of inhibition of arginine vasopressin on systemic and coronary hemodynamics, 172A
- Vasopressin (AVP) is elevated to pressor

levels and unopposed by atrial natriuretic factor (ANF) following repair of coarctation of the aorta (CoA), 136A

## Arrhythmias

- Determinants and outcome of early and late arrhythmia after Fontan operation, 170A
- Nonhomogenous redistribution of regional myocardial blood flow and potassium during reperfusion of ischemic myocardium, 127A

#### Arrhythmias, atrial

- Atrial natriuretic factor in atrial flutter and fibrillation: Role of atrial rate and cardioversion, 76A
- Flecainide acetate for the treatment of postoperative atrial arrhythmias, 164A
- Flecainide for prevention of paroxysmal atrial fibrillation and flutter. A multicenter, double-blind, placebo-controlled crossover study, 164A

#### Arrhythmias, ventricular

- Comparison of antiarrhythmic efficacy and safety of class IA, IB, and IC agents in symptomatic and potentially malignant ventricular arrhythmia, 163A
- Delayed ventricular arrhythmias (phase 1B) resulting from midmyocardial reentry, 128A
- Effect of beta-blockade on the circadian variation of ventricular arrhythmias, 34A
- Effect of myocardial revascularization on inducible ventricular arrhythmias, 174A
- Effects of combined low doses of quinidine and metoprolol of inducible ventricular arrhythmias in a chronic canine infarct model. 248A
- Incidence of serious ventricular arrhythmias during surgery in hypertensives with left ventricular hypertrophy, 105A
- Risk of ventricular arrhythmias according to anatomical categories of left ventricular hypertrophy, 105A
- Short term variability of ventricular arrhythmia and rapid assessment of drug efficacy, 140A
- Spontaneous variability in ventricular arrhythmias during chronic "effective" antiarrhythmic therapy, 33A
- Ventricular arrhythmias following orthotopic cardiac transplantation: relationship to acute rejection and sudden death, 211A
- Ventricular arrhythmias in patients with essential hypertension, 105A

# Arterial wall stiffness

In vivo measurement of segmental arterial wall stiffness in pigs using a real-time ultrasonic sector imaging catheter, 218A

#### Arteriography

- Dipyridamole-Doppler echocardiography: comparison to thallium-201 imaging and quantitative coronary arteriography, 159A
- Is yearly coronary arteriography sufficient for detection of coronary artery disease in heart transplant recipients?, 242A

## Arvin

Defibrinogenation reduced infarct size in a canine model of acute myocardial infarction, 125A

# Aspirin

Antithrombolytic therapy: is the combination

- of aspirin and nitroglycerin beneficial?, 145A
- Aspirin but not standard heparin prevents thrombus fibrin deposition in rabbits treated with tissue plasminogen activator, 77A
- Early intervention with low dose aspirin in first acute transmural anterior myocardial infarction: infarct size, clinical outcome and follow-up, 27A
- Effect of low dose aspirin on the incidence and hematological activity of left ventricular thrombosis in patients with anterior myocardial infarction. 199A
- Effects of aspirin on in vitro lysis with urokinase of combined platelet and fibrin thrombi, 91A
- Myocardial infarction with minimal atherosclerosis: a syndrome of young women with guarded long term prognosis, 27A
- Overview of bleeding risk from the TAMI trials: two agents are better than one,
- Prediction and prevention of myocardial infarction during the acute phase of unstable angina, 192A
- Preoperative aspirin is not necessary to achieve improved vein graft patency after coronary artery bypass surgery, 165A
- rTPA versus rTPA plus PTCA in acute myocardial infarction: quantitative results of early and late coronary arteriography, 54A
- S.T.A.I. (Study of Ticlopidine in Unstable Angina), 238A
- Thrombolytic therapy in unstable angina and non-Q wave myocardial infarction: a randomized trial of urokinase versus aspirin, 15A
- Tissue plasminogen activator for unstable angina pectoris: a multicenter, randomized, double-blind, placebo-controlled trial, 191A

#### Atenoloi

- Antihypertensive therapy is improved by central effects of arterial dilation and reduced wave reflection. 244A
- Differences in distribution of beta-blockers in infarcted porcine hearts. A study with positron emission tomography, 64A

#### Atherectomy

- Acute outcome of atherectomy in peripheral arterial obstructive disease, 108A
- Angiographic appearance following percutaneous coronary atherectomy, 223A
- Bard rotary atherectomy system (BRAS) in normal canine coronary arteries, 223A
- Clinical follow-up in 40 patients treated with peripheral percutaneous atherectomy, 107A
- Comparison of early and recent experience in percutaneous coronary atherectomy, 108A
- Complications: early experiences of percutaneous coronary atherectomy, 222A
- Coronary atherectomy for the treatment of unfavorable PTCA lesions, 109A
- Factors associated with restenosis following successful peripheral atherectomy, 13A Greater improvement in coronary flow velocity

- with atherectomy compared to angioplasty, 108A
- Histological evaluation of "vessel biopsies" obtained with the Simpson atherectomy catheter, 149A
- Human percutaneous coronary rotational atherectomy: results and short follow up, 228A
- Initial experience with a flexible rotational atherectomy system designed for removal of coronary and small peripheral artery atheromas, 223A
- Intravascular ultrasound visualization of atheroma plaque removal by atherectomy, 222A
- Percutaneous coronary atherectomy: early experiences of multicenter trial, 108A
- Percutaneous transluminal coronary rotablation during heart catheterization, 228A
- Utility of an intravascular ultrasound imaging device for arterial wall definition and atherectomy guidance, 222A

#### Atheroma

Media thinning of severely diseased coronary arteries: guidelines for new interventional procedures, 194A

#### Atherosclerosis

- See also Atherectomy; Coronary artery disease Compensatory coronary dilatation and media thinning: adaptive responses to progressive atherosclerosis, 196A
- Contrasting effects of acetylcholine on coronary conductance and resistance vessels in patients with coronary artery disease, 133A
- Contrasting effects of continuous wave and pulsed laser irradiation on vasoreactivity of atherosclerotic vessels in vitro, 14A
- Coronary artery disease is associated with inadequate left ventricular hypertrophy in aortic stenosis, 81A
- Coronary atherosclerosis impairs control of shear stress, 42A
- Correlation of coronary arterial with systemic atherosclerosis, 42A
- Dietary intake of saturated fat and cholesterol in early childhood: implications for prevention of atherosclerosis, 12A
- Endothelial function influences the coronary vasomotor response to sympathetic stimulation in man, 202A
- Evaluation of mixed atherosclerotic plaques by quantitative ultrasonic methods, 5A
- Histological evidence of coronary atherosclerosis as a cause of myocardial ischemia in patients with normal coronary arteriograms, 150A
- Impact of compensatory enlargement of atherosclerotic coronary arteries on the angiographic assessment of coronary artery disease, 196A
- In vivo photosensitizer enhanced laser angioplasty in atherosclerotic Yucatan miniswine, 43A
- In vivo recanalization of total atherosclerotic arterial occlusions: combined use of an ultrasonic probe and balloon angioplasty system, 195A
- Intravascular ultrasound imaging of atherosclerotic coronary arteries: an in vivo validation study, 4A

- Percutaneous laser angioplasty of peripheral atherosclerotic obstructions by the Unicorn-Cap (Tm) probe system: a multicenter study, 14A
- Preserved flow-mediated vasodilation despite acetylcholine-induced vasoconstriction in atherosclerotic coronary arteries in man, 132A
- Progression of coronary atherosclerosis and enhanced thrombin-induced platelet aggregability, 42A

#### Atresia

- Right ventricular growth and function following Fontan procedure for tricuspid atresia, 239A
- Right ventricular size and pulmonary flow in patients after first stage surgery for pulmonary atresia: combined assessment by cine magnetic resonance imaging and color Doppler flow mapping, 240A

#### Atrial defects

Transcatheter umbrella closure of atrial defects. 120A

#### Atrial fibrillation

- Amplification of diltiazem's effects on the AV node by rapid atrial input leads to selective actions during atrial fibrillation, 164A
- Changes in left atrial size due to chronic atrial fibrillation. 206A
- Effect of cardiac pacing mode on the long-term development of atrial fibrillation, 217A
- Flecainide for heart rate control in atrial fibrillation, 164A
- Intravenous flecainide versus intravenous disopyramide in the reversion of atrial fibrillation, 165A
- Left atrial enlargement as a consequence of atrial fibrillation: a prospective echocardiographic study, 206A
- Left ventricular function in atrial fibrillation: a comparison before and after cardioversion, 207A
- Mechanism of compensatory pause in atrial fibrillation, 173A
- Mechanism of the onset of atrial fibrillation in the Wolff-Parkinson-White syndrome: how important is the accessory pathway?, 203A
- Oral propafenone for prevention of recurrent primary atrial fibrillation: predictive value of the response to transesophageal atrial stimulation, 233A
- Reliability of procainamide in predicting the shortest preexcited R-R interval during atrial fibrillation is dose dependent, 204A

#### Atrial flutter

Direct entrainment guided ablation of the slow conduction zone (SCZ) in human type I atrial flutter (AF), 168A

#### Atrial natriuretic factor

- Acute and chronic antihypertensive efficacy of atriopeptidase inhibition in rats, 76A
- Acute effects of atriopeptidase inhibition on plasma atrial natriuretic factor in chronic heart failure. 76A
- ANF blunts forearm vasoconstriction to lower body negative pressure in essential hypertension, 83A
- Atrial natriuretic factor in atrial flutter and

- fibrillation: role of atrial rate and cardioversion, 76A
- Atrial natriuretic factor in patients with right ventricular infarction, 93A
- Atrial natriuretic factor inhibition of renin during renal hypoperfusion: role for the macula densa, 8A
- Atrial natriuretic peptide and elevated right heart pressures in essential hypertension, 81A
- Atrial natriuretic peptide from the coronary sinus is acutely increased following induction of paroxysmal tachycardia, 172A
- Atriopeptidase inhibitors, a novel class of drugs that raises levels of endogenous atrial natriuretic factor—the preclinical pharmacology of UK-69,578, 75A
- Cardiovascular hormones in relation to mortality in severe heart failure, 246A
- Clinical value of measuring atrionatriuretic factor after balloon aortic valvuloplasty, 56A
- Coronary hemodynamic effects of atrial natriuretic peptide, 132A
- Direct suppression of aldosterone secretion by endogenous atrial natriuretic peptide in hemodynamically normal man: evidence for physiologic role of ANP, 172A
- Does ANF influence venous return?, 171A
- Does tolerance to atrial natriuretic factor (ANF) develop during 24 hour-infusion in patients with congestive heart failure?, 9A
- Effect of atrial natriuretic factor on left ventricular diastolic function in humans with heart failure, 172A
- Effect of combined dynamic exercise and head-out water immersion on atrial natriuretic peptide, 41A
- Effects of different pacing modes on right atrial pressure and atrial natriuretic peptide in patients with atrioventricular block, 217A
- In the human, expression of ventricular ANF is independent of ventricular dilatation, 10A
- Is atrial natriuretic factor involved in the modulation of coronary tone in man?, 186A
- Lack of inotropic effect of atrial natriuretic factor in humans with heart failure: demonstration by left ventricular end-systolic pressure-volume analysis, 9A
- N-terminal (1-25) atrial natriuretic factor in humans with congestive heart failure: a marker for endogenous secretion, 9A
- Pacemaker syndrome is associated with very high plasma concentrations of atrial natriuretic peptide (ANP), 111A
- Pharmacological elevation of endogenous atrial natriuretic factor in man using the atriopeptidase inhibitor (UK 69578), 76A
- Preserved atrial natriuretic peptide secretory function in denervated cardiac transplant recipients, 243A
- Prohormone atrial natriuretic peptides 1-30, 31-67, and 99-126 increase in proportion to right ventricular pacing rate, 217A
- Rapid reduction of plasma atrial natriuretic peptide after balloon mitral valvuloplasty in patients with mitral stenosis, 69A
- Relationship of left and right atrial pressures to

atrial natriuretic factor elaboration during exercise in normal man, 40A

Response of atrial natriuretic factor to percutaneous mitral valvuloplasty, 56A

Vasopressin (AVP) is elevated to pressor levels and unopposed by atrial natriuretic factor (ANF) following repair of coarctation of the aorta (CoA), 136A

Ventricular levels of the atrial natriuretic factor and of its messenger ribonucleic acid at the time of heart transplantation, 9A

#### Atrial pressure

Mitral opening pressure strongly influences left ventricular peak rapid filling rate, 130A

Relationship of left and right atrial pressures to atrial natriuretic factor elaboration during exercise in normal man, 40A

#### Atrial septal defect

Hemodynamic results and follow-up of patients with iatrogenic atrial septal defect following balloon mitral valvuloplasty, 70A

#### Atrial size

Changes in left atrial size due to chronic atrial fibrillation, 206A

Left atrial enlargement as a consequence of atrial fibrillation: a prospective echocardiographic study, 206A

#### Atrial stimulation

Oral propagenone for prevention of recurrent primary atrial fibrillation: predictive value of the response to transesophageal atrial fibrillation, 233A

# Atrioventricular junction

Catheter ablation of the atrioventricular junction using radiofrequency energy, 169A

#### Atrioventricular node

Effect of epicardial accessory pathway ablation or endocardial dissection for AV nodal reentrant tachycardia on vagal innervation to the AV node, 232A

#### Atropine

Abnormal QT/QS<sub>2</sub> ratio at rest and exercise in Romano-Ward long QT patients, normalized by beta-blocker therapy, 11A

Autonomic influence on ventricular subsidiary pacemakers: a study of patients post AV nodal ablation, 232A

Modulation of the fetal left ventricular function curve by the thoracic tissue, 136A

#### Autoantibodies

Effect of cardiac transplantation on anti-beta-receptor autoantibodies, 253A

Novel cardiac-specific circulating autoantibodies in dilated cardiomyopathy, 88A

## Autoantigens

Sharing of antigenic determinants between coxsackie B3 virus and autoantigens in viral myocarditis and dilative cardiomyopathy, 253A

# Automaticity

Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil and class I agents, 249A

#### Azathioprine

Cytomegalovirus infection in cardiac transplant

recipients predicts the incidence of allograft atherosclerosis, 213A

Prophylactic anti-rejection therapy early after cardiac transplantation: RATG versus OKT3, 62A

Treatment of cardiac allograft rejection with pulsed steroids: a three year experience, 210A

#### B cell antibodies

Cytotoxic B cell antibodies: insensitive predictor of coronary disease post heart transplantation, 42A

#### Barium

Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil, 249A

#### Bayes theorem

Diagnostic strategies based on clinical and exercise variables: liberation from Bayes's theorem?, 182A

#### Bernoulli equation

Can the modified Bernoulli equation accurately estimate instantaneous transmitral pressure gradients in patients with cardiac pathology?, 234A

# Beta-adrenergic activity

Enhanced β-adrenergic activity in non-infarcted myocardium may cause exercise-induced ST-segment elevation in old myocardial infarction, 124A

## Beta-adrenergic blocking agent

See also specific agent

Effect of beta-blockade on the circadian variation of ventricular arrhythmias, 34A

Impact of medical and surgical therapy on the cardiovascular prognosis of the Marfan syndrome in early childhood, 119A

Majority of physicians use drug therapy for isolated systolic hypertension, 13A

Nifedipine in unstable angina: beneficial effects in the elderly and in patients with reduced left ventricular function, 239A

Prior beta blocker therapy improves 28 day post infarction survival, 12A

## Beta-adrenergic receptor

Enhanced beta-adrenergic receptor function in symptomatic mitral valve prolapse, 146A

Exercise alters guanine nucleotide binding proteins, 40A

Portrayal of cardiac beta receptors in living animals, 64A

Selective β-1 adrenergic receptor down-regulation in experimental canine heart failure, 181A

# Bleeding

Detection of myocardial hemorrhage using <sup>1</sup>H NMR imaging at 1.5 T, 48A

Overview of bleeding risk from the TAMI trials: two agents are better than one, 198A

## **Blood flow**

See also Coronary flow

Attenuation of early mitral flow velocity by acute aortic insufficiency, 210A

Doppler color flow mapping of the "proximal isovelocity surface area": a new method for measuring volume blood flow across an orifice, 225A

Gradual increase in left ventricular dimension with decrease in pressure half-time of

transmitral flow following balloon mitral valvuloplasty, 59A

Implantable and extractable sensor for intra and postoperative monitoring of blood flow in man, 214A

Pulsed Doppler echocardiographic mitral valve flow patterns and left ventricular chamber properties in patients with previous myocardial infarction, 209A

Validation of Doppler echocardiographic calculation of descending aortic and umbilical flow in fetal lambs, 137A

Valve resistance in aortic stenosis: an alternative method for assessing the hemodynamic significance of flow obstruction, 234A

#### **Blood pressure**

See also Hypertension

Antihypertensive therapy is improved by central effects of arterial dilation and reduced wave reflection, 244A

#### **BRR-I-28**

Effects of BRB-I-28 upon longitudinal and transverse conduction in canine myocardium, 138A

#### Bucindolol

Beneficial effects of longterm beta-blockade with bucindolol in patients with idiopathic dilated cardiomyopathy, 117A

#### **Bundle branch block**

Signal-averaged electrocardiogram predicts arrhythmic events in patients with left bundle branch block, 190A

# Bypass devices

Percutaneous left atrial-femoral bypass with a pulsatile pump: initial human experience in cardiogenic shock, 53A

# <sup>14</sup>C-deoxyglucose

Assessment of "no-reflow" phenomenon during reperfusion with 99mTc-MIBI and 14C deoxyglucose, 30A

## Caffeine

Caffeine is proarrhythmic in patients with organic heart disease, 32A

Coffee use and acute myocardial infarction, 36A

#### Calcium

Blood pressure, left ventricular mass and intracellular calcium in primary hyperparathyroidism, 82A

Frequency response of action potentials from human myocardium, 185A

Impaired myocardial reserve and calcium intolerance occur prior to the congestive heart failure stage in the cardiomyopathic hamster, 180A

Postnatal development changes in myocardial mitochondrial calcium transport, 137A

Treatment of hypertension alters the relationship between platelet calcium and sensitivity to aggregatory agents, 104A

## Calcium channel blockers

See also specific agent

Myocardial infarction with minimal coronary atherosclerosis: a syndrome of young women with guarded long term prognosis, 27A

## Calcium chloride

Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A 276A SUBJECT INDEX

#### Captopril

- Captopril pretreatment and myocardial fibrosis and stiffness in renovascular hypertension, 82A
- Effect of oral administration of antihypertensive agents on endothelium dependent and endothelium independent vascular relaxation, 83A

#### Carbachol

Effect of cholinergic agonist carbachol and cyclic guanosine monophosphate on sudden cardiac death, 91A

#### Carbon dioxide

- Excessive ventilatory responses to carbon dioxide production during exercise in patients with congestive heart failure, 242A
- Importance of analyzing inspiratory gases when calculating oxygen consumption and carbon dioxide production during exercise, 119A

## Cardiac arrest

See also Sudden death

- Effect of successful defibrillation on subsequent defibrillation threshold in a canine model of rapidly recurring cardiac arrest, 66A
- Portable bypass does not improve survival in cardiac arrest patients, 121A

#### Cardiac catheterization

- Can in-patient cardiac catheterization be eliminated by out-patient procedures?,
- Fate of acute myocardial infarction patients with successful mechanical (rescue) vs. chemical patency of the infarct vessel at emergency catheterization, 192A

#### Cardiac conduction

- Antegrade and retrograde conduction occurring over separate, adjacent accessory AV pathways, 173A
- Chronic effects of A-V nodal artery embolization, 233A
- Cocaine mediated impairment of cardiac conduction in the conscious dog, 79A
- Comparison of flecainide vs. procainamide in depressing retrograde conduction in atrioventricular nodal reentry tachycardia, 165A
- Cytoplasmic and junctional components of anisotropic internal resistance in canine myocardium, 129A
- Dynamic response of conduction velocity to quinidine during pulse train stimulation in canine Purkinje fibers, 163A
- Effects of low energy direct current countershock on atrioventricular nodal junction in dog using suction-ablation catheter, 176A
- Epicardial mapping of rate-dependent ventricular conduction slowing by procainamide, 251A
- Evidence for two types of sodium currents in isolated neonatal AV nodal heart cells, 128A
- Evidence that cocaine slows cardiac conduction by an action on both AV nodal and His-Purkinje tissue in the dog, 70 A
- Identification of putative intramural conduction cells in canine left ventricle, 129A

- Masking of tissue anisotropy—a computer model of the interaction between activation wavefront and fixed barriers, 129A
- Mechanisms of electrotonic uncoupling of myocardium induced by hypoxia, 130A
- Rate-dependent slowing of intraventricular conduction by procainamide: direct measurement in the human heart, 250A
- Retrograde conduction properties determine rate-dependent efficacy of diltiazem for AV reentrant tachycardia, 251A
- Strength of monophasic and biphasic shocks that cause conduction block, 67A
- Sympathetic-induced changes in atrial excitation sequences influence AV nodal conduction, 129A

#### Cardiac depression

- Exercise cardiac output declines with advancing age in normal subjects, 241A
- Non-invasive determination of cardiac output during acute myocardial infarction using electrical bioimpedance cardiography, 102A
- Reversible cardiac depression caused by the supernatant of lymphocytes cultured with interleukin-2, 207A

#### Cardiac resuscitation

See Resuscitation

#### Cardiac tamponade

- Left ventricular pseudo hypertrophy in pericardial effusion: a sign of cardiac tamponade. 235A
- Pleural effusion as a cause of right ventricular diastolic collapse and cardiac tamponade, 236A

## Cardiac transplantation

- Acetylcholine is a potent vasoconstrictor in human coronary arteries early after cardiac transplantation, 85A
- Cardiac transplantation in peripartum cardiomyopathy, 213A
- Cardiopulmonary exercise response in adolescents following cardiac transplantation, 135A
- Coronary artery to right ventricular fistulae in heart transplant recipients: a complication of endomyocardial biopsy, 243A
- Cyclosporine and concomitant ketoconazole after cardiac transplantation: intermediate term findings and potential savings, 62A
- Cytomegalovirus infection in cardiac transplant recipients predicts the incidence of allograft atherosclerosis, 213A
- Cytotoxic B cell antibodies: intensive predictor of coronary disease post heart transplant,
- Decreased rejection in older cardiac transplant patients, 38A
- Development of physiologic exercise heart rate responses after cardiac transplantation,
- Diagnostic applications of lymphocyte cultures from heart allograft biopsies, 62A
- Echocardiographic features of the transplanted heart in well patients one year post transplantation, 243A
- Effect of cardiac transplantation on anti-beta receptor autoantibodies, 253A
- Electrocardiographic changes during

- dipyridamole stress as potential markers of acute cardiac rejection, 88A
- Electrophysiologic effects of adenosine following orthotopic cardiac transplantation: evidence of supersensitivity, 163A
- Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A
- Is atrial activation beneficial in heart transplant recipients, 111A
- Is yearly coronary arteriography sufficient for detection of coronary artery disease in heart transplant recipients?, 242A
- Ischemic time and graft function in human infant cardiac transplantation, 120A
- Left ventricular diastolic function—Doppler changes in early post cardiac transplant recipient, 99A
- Magnetic resonance imaging in ischemic injury following cardiac transplantation, 200A
- One heart, two bodies: insights from the transplanted heart's new electrocardiogram, 243A
- Positron emission tomography reveals decreased coronary flow response to exercise after cardiac transplantation, 242A
- Prednisone withdrawal in "high risk" cardiac transplant recipients, 212A
- Preserved atrial natriuretic peptide secretory function in denervated cardiac transplant recipients. 243A
- Prophylactic anti-rejection therapy early after cardiac transplantation: RATG versus OKT3, 62A
- Recovery of small and large artery vasoconstriction in severe heart failure following heart transplantation, 40A
- Response to nitroprusside—predictor of early post transplant mortality, 62A
- Resting and supine exercise hemodynamics improve 1 and 3 years after orthotopic cardiac transplantation, 100A
- Right ventricular electrocardiographic abnormality in orthotopic heart transplant patients, 11A
- Right ventricular restrictive/constrictive physiology accompanies heart transplant rejection, 100A
- Serial evaluation of cardiac transplant function: relationship to donor heart ischemic time, donor heart age and severe rejection episodes, 212A
- T2 relaxation time as a predictor of cardiac transplant rejection in humans, 201A
- Use of enoximone in cardiac transplant candidates: effect on β-adrenergic receptors, 248A
- Ventricular arrhythmias following orthotopic cardiac transplantation: relationship to acute rejection and sudden death, 211A
- Ventricular levels of the atrial natriuretic factor and of its messenger ribonucleic acid at the time of heart transplantation, 9A
- Ventricular volume and function in infant orthotopic heart transplantation, 239A

## Cardiocytes

Endocrine conversion of ventricular cardiocytes in ventricular aneurysm, 171A

#### Cardiomyopathy

- See also Hypertrophy
- Antibody mediated disturbance of myocardial function—a model for dilated cardiomyopathy, 89A
- Beneficial effects of longterm beta-blockade with bucindered in patients with idiopathic dilated cardiomyopathy, 117A
- Can pre-operative peak coronary flow predict symptom and metabolic benefit after operative relief of obstruction in hypertrophic cardiomyopathy, 87A
- Effect of cardiac transplantation on anti-beta-receptor autoantibodies, 253A
- Enhanced cardiac adrenergic response in cardiomyopathic hamster at a pre-congestive failure stage, 87A
- Estimation of the concentration and function of the ADP/ATP carrier in the myocardium of patients with dilated cardiomyopathy (DCM), 251A
- Evidence for an abnormal vasodilator response in hypertrophic cardiomyopathy, 117A
- Growth factors identified in myocardium of patients with hypertrophic cardiomyopathy, 118A
- Impaired myocardial reserve and calcium intolerance occur prior to the congestive heart failure stage in the cardiomyopathic hamster, 180A
- Mechanisms of impaired vasodilation in the coronary microvasculature of patients with dilated cardiomyopathy, 178A
- Mechanism of inducible ventricular tachycardia in patients with idiopathic dilated cardiomyopathy, 174A
- Noninvasive discrimination in the right atrial ectopic from sinus tachycardia in dilated "cardiomyopathic" hearts, 137A
- Novel cardiac-specific circulating autoantibodies in dilated cardiomyopathy, 88A
- <sup>31</sup>P-magnetic resonance spectroscopy and cine <sup>1</sup>H magnetic resonance imaging of dilated cardiomyopathy in humans, 199A
- Porcine model of myocarditis leading to dilated cardiomyopathy, 253A
- Possible difference of metabolical condition in patients with dilated cardiomyopathy and severe coronary artery disease: evaluation by positron emission tomography, 103A
- Prevalence and direction of mitral regurgitation in hypertrophic cardiomyopathy, 89A
- Prognostic value of late potentials in hypertrophic cardiomyopathy, 35A
- Q waves in hypertrophic cardiomyopathy: presence and localization according to the site and extent of right and left ventricular hypertrophy, 10A
- Reducing left ventricular outflow tract obstruction in patients with hypertrophic cardiomyopathy by pacing-induced intraventricular septal pre-excitation, 117A
- Relation between left ventricular hypertrophy, filling, and perfusion in asymptomatic hypertrophic cardiomyopathy, 80A
- Relationship between the extent of muscular hypertrophy and diastolic function in patients with hypertrophic cardiomyopathy without left ventricular

- outflow gradients or mitral regurgitation, 89A
- Sharing of antigenic determinants between coxsackie B virus and autoantigens in viral myocarditis and dilative cardiomyopathy, 253A
- Signal-averaged electrocardiogram predicts arrhythmic events in patients with left bundle branch block, 190A
- Signal-averaged electrocardiographic differences between patients with non-myopathic left ventricular hypertrophy and patients with hypertrophic cardiomyopathy, 189A
- Spectrum of restrictive cardiomyopathy: a multicenter study, 116A
- Survival of patients with hypertrophic cardiomyopathy successfully resuscitated from sudden cardiac death, 117A
- T lymphocyte subsets as the noninvasive marker of cardiomyopathy, 88A

#### Cardiomyoplasty

- Augmentation of myocardial function with dynamic cardiomyoplasty in a chronic canine model, 213A
- Evidence of lattissimus dorsi muscle adaptation before cardiomyoplasty, 214A

#### Cardiopulmonary bypass

- Cardiopulmonary bypass supported coronary angioplasty in inoperable patients, 53A
- Emergency percutaneous cardiopulmonary (bypass) support in cardiogenic shock, 160A
- Emergency use of portable cardiopulmonary bypass in patients with cardiac arrest, 160A
- Percutaneous cardiopulmonary bypass to support high risk elective coronary angioplasty, 160A
- Percutaneous institution of cardiopulmonary (bypass) support: technique and complications, 159A

## Cardioverter defibrillator

- Automatic implantable cardioverter defibrillator: analysis of spontaneous shocks, 66A
- Automatic implantable cardioverterdefibrillator and patient survival: a case study, 65A
- Automatic implantable cardioverter defibrillator implantation by a non-thoracotomy approach, 217A
- Automatic implantable cardioverter defibrillator in patients on chronic amiodarone: effects on the defibrillation threshold and the rate of shocks, 177A
- Clinical evaluation of an implantable cardioverter/defibrillator with nonepicardial leads in patients with refractory ventricular tachyarrhythmias, 215A
- Does poor cardiac function preclude benefit from an automatic implantable cardioverter defibrillator?, 65A
- Operative (30-day) mortality following implantation of the automatic implantable cardioverter defibrillator, 122A
- Optimal catheter electrode dimensions for non-thoracotomy cardioversion/ defibrillation lead system, 216A

Protocol for evaluation of internal defibrillation safety margins, 111A

#### Carditis

See also myocarditis

Does myocardial involvement in children with severe mitral regurgitation (MR) due to active rheumatic carditis (ARC) influence the outcome of mitral valve replacement (MVR)?, 146A

#### Catecholamines

- Alterations in lymphocyte subsets and catecholamines in congestive heart failure, 180A
- Enhanced beta-adrenergic receptor function in symptomatic mitral valve prolapse, 146A
- Exercise training alters catecholamine metabolism in healthy older men, 41A
- Catecholamine metabolic pathways and exercise training: plasma and urine catecholamines, metabolic enzymes, and chromografin A. 182A

#### Catheter(s)

- See also Ablation procedures; under Doppler ultrasound; under Echocardiography; under Valvuloplasty
- Ablation of canine ventricular myocardium with a cryogenic catheter: a new closed-chest ablative technique?, 186A
- Benefit of the "bailout" catheter for emergency bypass surgery after failed PTCA, 155A
- Endocardial isochronal patterns near the ventricular tachycardia site of origin with orthogonal electrode catheter array, 167A
- Experience with the intracoronary Doppler catheter in patients with clinical ischemic heart disease but normal or trivially diseased coronaries, 161A
- Histologic evaluation of "vessel-biopsies" obtained with the Simpson atherectomy catheter, 149A
- Mechanical transluminal coronary endarterectomy: initial clinical experience with the Auth mechanical rotary catheter, 227A
- Preservation of myocardial function by a coronary perfusion catheter, 52A
- Prolonged autoperfusion angioplasty: immediate clinical outcome and angiographic follow-up, 155A
- Treatment of peripheral vascular disease with the transluminal extraction catheter: results of a multicenter trial, 227A
- Use of the ACS stack perfusion dilation catheter in PTCA to avoid coronary artery bypass surgery, 155A

## Catheterization

See Cardiac catheterization

#### Cholesteroi

- See also Hypercholesterolemia
- Cardiovascular risk reduction through worksite health promotion, 134A
- Effects of cyclosporine on serum lipoproteins, 41A
- Family history predictors of high blood cholesterol levels in 4th grade school children, 36A
- Membrane incorporation of unsaturated fatty acids increases LDL metabolism by U937 monocytes, 32A
- Risk factors and mortality in the multiple risk

factor intervention trial after 10.5 years of follow-up, 11A

#### Choline chloride

Preliminary biochemical characterization of the canine cardiac sodium channel, 208A

#### Circadian patterns

Increased morning incidence of myocardial infarction: experience in the ISIS-2 trial, 133A

#### Climatologic variables

Climatologic variables and acute myocardial infarction: a time course study, 133A

#### Clonidin

Role of  $\alpha$ -adrenergic receptors in syndrome X, 150A

#### Coarctation of the aorta

Remodeling of the aorta following successful balloon coarctation angioplasty, 240A

Vasopressin (AVP) is elevated to pressor levels and unopposed by atrial natriuretic factor (ANF) following repair of coarctation of the aorta (CoA), 136A

#### Cocaine

Cardiodepressant effects of cocaine, 78A Cocaine-induced contraction of vascular smooth muscle is inhibited by calcium channel blockade, 78A

Cocaine induced deleterious effects on the canine coronary circulation, 79A

Cocaine mediated impairment of cardiac conduction in the dog, 79A

Ergonovine testing in cocaine induced myocardial ischemia, 79A

Evidence that cocaine shows cardiac conduction by an action on both AV nodal and His-Purkinje tissue in the dog, 79A

## Coffee

See Caffeine

#### Cold

Effect of cold upon ischemic threshold in patients with stable angina: magnitude and mechanism, 184A

#### Cold pressor test

Endothelial function influences the coronary vasomotor response to sympathetic stimulation in man. 202A

# Collagen

Alterations in collagen cross-linking impair myocardial contractility in vitro of the Movbr mouse heart, 208A

Elevated right ventricular pressure increases collagen in ventriculotomy scars in canines, 118A

## Collaterals

Bimodal time course of collateral development in acute myocardial ischemia, 45A

#### Commissurotomy

Advantages of INOUE-balloon (self-positioning balloon) in percutaneous transvenous mitral commissurotomy (PTMC) and aortic valvuloplasty, 18A

Early and longterm results after mitral valvuloplasty as compared with open commissurotomy, 55A

Features of severe mitral regurgitation following percutaneous balloon commissurotomy, 55A

Long-term follow-up of patients undergoing closed transventricular mitral commissurotomy, 18A Percutaneous mitral valvuloplasty in patients with previous surgical commissurotomy, 55A

#### Compliance

Concurrent compliance reduction and increased resistance in the manifestation of isolated systolic hypertension, 244A

Effect of receiving chamber compliance on the spatial distribution of regurgitant jets as imaged by color Doppler flow mapping: an in-vitro study, 23A

Net left atrial and ventricular compliance can be derived from transmitral velocity curves: a hydrodynamic in vitro study, 198A

Noninvasive assessment of arterial compliance in patients with systemic hypertension, 244A

Percutaneous mitral valvotomy increases left atrial compliance without affecting its pressure-volume curve, 70A

Ventricular and atrial compliance changes affect pressure half time: experimental evidence, 234A

# Computed tomography

See Tomography

#### Conduction

See Cardiac conduction

#### Congenital heart defects

Bidirectional cavo-pulmonary anastomosis, 74A

Late potentials and inducible ventricular tachycardia in surgically repaired congenital heart disease, 170A

Occurrence of congenital heart defects in offspring of patients with ventricular septal defect, aortic stenosis, or pulmonary stenosis: results of the second natural history study of congenital heart defects, 136A

Prevalence of congenital heart disease in offspring of parents with Fallot's tetralogy, 240A

Repair of complex congenital heart disease with the use of valved conduit, 211A

## Congestive heart failure

Abnormal thiiodothyronine is the strongest short-term prognostic factor identified in advanced heart failure, 181A

Accelerated arterial wave reflection with dopamine but not dobutamine in congestive heart failure, 247A

Alterations in lymphocyte subsets and catecholamines in congestive heart failure. 180A

Alterations in the catalyst of adenylate cyclase and the inhibitory guanine nucleotide regulatory protein in experimental heart failure, 179A

Alterations in the ventilatory anaerobic threshold after a chronic intervention reflect changes in lactate production during exercise in heart failure. 39A

Capillary density, fiber type and enzyme composition of skeletal muscle in congestive heart failure, 38A

Cardiovascular hormones in relation to mortality in severe heart failure, 246A

Comparison of exercise protocols: evaluation of oxygen uptake kinetics in heart failure, 242A

Decreased aerobic oxidative capacity in skeletal muscle in chronic heart failure, 39A

Does tolerance to atrial natriuretic factor (ANF) develop during 24 hour-infusion in patients with congestive heart failure?, 9A

Effects of flosequinan on metabolic and ventilatory parameters during submaximal exercise in cardiac failure, 181A

Excessive ventilatory responses to carbon dioxide production during exercise in patients with congestive heart failure, 247A

Hemodynamic correlates of increased cardiac adrenergic drive in the intact failing human heart, 245A

Increased exercise capacity in heart failure patients following digoxin administration, 183A

Model for congestive heart failure: selenium and vitamin E deficient mini pigs, 208A

N-terminal (1-25) atrial natriuretic factor in humans with congestive heart failure: a marker for endogenous secretion, 9A

Negative inotropic effect of nicardipine in patients with heart failure: demonstration by left ventricular end-systolic pressure-volume analysis, 178A

Neurohormonal activation limits the long-term response to the dopamine-1 receptor agonist fenoldopam in chronic heart failure, 246A

Oral isosorbide dinitrite in chronic heart failure: tolerance development to QID vs. TID regimen, 178A

Oscillatory shifts in oxygen uptake diminish the functional relevance of gas exchange measurements during exercise in chronic heart failure, 241A

Prognosis of congestive heart failure (CHF) evaluated by I-123 metaiodobenzylguanidine (MIBG) myocardial imaging, 180A

Recovery of small and large artery vasoconstriction in severe heart failure following heart transplantation, 40A

Skeletal muscle metabolic abnormalities in heart failure are in part due to intrinsic skeletal muscle changes, 39A

Temporal dissociation between invasive and non-invasive determination in anaerobic threshold in chronic heart failure, 39A

#### Conotruncal abnormalities

Noncardiac defects associated with conotruncal abnormalities—further implications of neural crest influence, 118A

#### Continuity equation

Estimation of effective mitral valve tissue prosthetic area using the continuity equation, 227A

#### Contractile function

Cardiac cycle-dependent variation of integrated backscatter: an index of contractile performance that is not distorted by paradoxical septal motion, 52A

Effect of atrial contraction and synchroneity of cardiac contraction on ventriculo-arterial coupling, 206A

Endothelium-dependent inhibition or ergonovine-induced contraction is

- impaired in porcine coronary arteries with regenerated endothelium, 31A
- Left ventricular isovolumic contraction period vanishes during intensive exercise, 102A

#### Contractility

- Alterations in collagen cross-linking impair myocardial contractility in vitro of the Movbr mouse heart, 208A
- Evidence of enhanced contractility in normal infants compared to older children and adults, 135A
- Importance of contractility in determining left ventricular size and performance in patients with aortic regurgitation, 71A
- Non-invasive assessment of improvement of regional left ventricular contractility after percutaneous transluminal coronary angioplasty by QRST isoarea map in patients with angina pectoris. 177A
- Utility of left ventricular elastance for predicting surgical outcome in patients with mitral regurgitation, 71A

#### Contraction-excitation feedback

Variability of negative T wave in left ventricular hypertrophy, the possible result of contraction-excitation feedback, 35A

#### Contrast media

Nephrotoxicity of nonionic contrast media: importance of dosage in high risk patients, 47A

## Converting enzyme inhibitors

Does age modify the hemodynamic and clinical response to converting-enzyme inhibitors in patients with chronic heart failure?, 57A

## Cor pulmonale

Pathological involvements of left ventricle in chronic cor pulmonale, 151A

#### Coronary artery

Hypersensitivity of coronary arteries to intracoronary ergonovine following orthotopic cardiac transplantation, 188A

# Coronary artery disease

See also Syndrome X

- Acute outcome and longterm follow-up of patients with acute myocardial infarction and single vessel disease treated with angioplasty without thrombolytic therapy, 94A
- Acute outcome of atherectomy in peripheral obstructive disease, 108A
- Angioscopic endothelial macropathology in patients with acute coronary syndromes, 14A
- Clinical comparison between thallium-201 and TC-99m methoxy isobutyl isonitrile (MIBI) myocardial perfusion imaging for detection of coronary artery disease, 30A
- Comparison of exercise electrocardiography and radionuclide angiography in the identification of severe coronary artery disease. 237A
- Compensatory coronary dilatation and media thinning: adaptive responses to progressive atherosclerosis: 196A
- Cytotoxic B cell antibodies: intensive predictor of coronary disease post heart transplant, 42A
- Effect of estrogen replacement and coronary

- artery disease on survival in postmenopausal women, 12A
- Exercise seismocardiography for detection of coronary artery disease: a preliminary report, 127A
- High dose dipyridamole-echocardiography test in hypertensives: correlation with exercise-electrocardiography test and coronary arteriography, 103A
- Impact of compensatory enlargement of atherosclerotic coronary arteries on the angiographic assessment of coronary artery disease, 196A
- "Laser wire" for percutaneous angioplasty complete peripheral and coronary arterial occlusions—initial clinical results, 60A
- Late follow-up of 781 patients undergoing percutaneous transluminal coronary angioplasty (PTCA) or open heart surgery (OHS) for an isolated obstruction in the left anterior descending (LAD) coronary artery, 166A
- Left ventricular function at rest and the prevalence of ambulatory silent ischemia in coronary artery disease, 203A
- Media thinning of severely diseased coronary arteries: guidelines for new interventional procedures, 194A
- Pivotal role of multivessel coronary artery disease and the remote zone in the reperfusion era, 92A
- Possible difference of metabolic condition in patients with dilated cardiomyopathy and severe coronary artery disease: evaluation by positron emission tomography, 103A
- Post-exercise ST segment depression in relation to heart rate: improved identification of coronary artery disease by the rate-recovery loop, 236A
- Relation between ischemia during exercise and ambulatory ischemic activity in coronary artery disease, 3A
- Relation of modified fatty acid uptake to wall motion and coronary anatomy, 29A
- Three decade trends in incidence of coronary disease and risk factors in the Framingham study, 35A
- Transthoracic two-dimensional ultrasonic high frequency (7.5 MHZ) visualization of the distal left anterior coronary artery, 116A

# Coronary flow

- Attenuation of early mitral flow velocity by acute aortic insufficiency, 210A
- Biphasic response of coronary blood flow to intracoronary nitroglycerin in normal subjects, 230A
- Blood-velocity imaging by magnetic resonance phase difference techniques for quantitative measurement of stroke volume, cardiac output and venous return: comparison with Doppler ultrasound, 48A
- Can pre-operative peak coronary flow predict symptom and metabolic benefit after operative relief of obstruction in hypertrophic cardiomyopathy, 87A
- Cocaine induced deleterious effects on the canine coronary circulation, 79A
- Do Doppler flow algorithms for mapping disturbed flow make sense?, 226A Doppler color flow mapping of the "proximal

- isovelocity surface area": a new method for measuring volume blood flow across an orifice, 225A
- Effects of adenosine on the coronary circulation in humans, 132A
- Gradual increase in left ventricular dimension with decrease in pressure half-time of transmitral flow following balloon mitral valvuloplasty, 59A
- Greater improvement in coronary flow velocity with atherectomy compared to angioplasty, 108A
- Impedance measurement of absolute blood flow using an angioplasty guidewire, 194A
- Implantable and extractable sensor for intra and postoperative monitoring of blood flow in man, 214A
- Increased flow velocity in the human coronary stenosis: a simple assessment of stenosis severity, 131A
- Incremental critical coronary stenosis contracts rather than expands myocardial vascular volume, 218A
- Myocardial contrast echo washout curves: the influence of ischemia and hyperemia,
- Myocardial contrast echocardiography can not be used to assess endocardial/epidardial blood flow ratio, 115A
- New approach to in vivo measurement of coronary flow utilizing high-speed coronary angiography, 7A
- Nitrogen-13 ammonia myocardial uptake at rest and with exercise in normal volunteers: quantification of coronary flow with dynamic positron emission tomography, 97A
- Nonhomogenous redistribution of regional myocardial blood flow and potassium during reperfusion of ischemic myocardium, 127A
- Positron emission tomography reveals decreased coronary flow response to exercise after cardiac transplantation, 242 A
- Pulsed Doppler echocardiographic mitral valve flow patterns and left ventricular chamber properties in patients with previous myocardial infarction, 209A
- Quantitative measurement of myocardial blood flow and coronary flow reserve in patients with CAD employing 0-15 water and positron emission tomography (PET), 97A
- Reduced myocardial blood flow with persistent vasodilator reserve: role of adrenergic activation, 187A
- Validation of Doppler echocardiographic calculation of descending aortic and umbilical flow in fetal lambs, 137A
- Valve resistance in aortic stenosis: an alternative method for assessing the hemodynamic significance of flow obstruction, 234A

# Coronary flow reserve

- Aging-related decrease in vasodilatory capacity in coronary microcirculation estimated by coronary Doppler catheter, 57A
- Details of coronary stenosis morphology influence its hemodynamic severity and distal flow reserve, 43A

- Effect of diltiazem on coronary flow reserve in man, 154A
- Effect of subcritical stenosis on coronary and myocardial flow reserve in territory supplied by other nonstenotic arteries, 7A
- Effects of short- and long-term hypertensive cardiac hypertrophy on the structural properties of the coronary resistance vessels, 187A
- Impaired myocardial reserve and calcium intolerance occurs prior to the congestive heart failure stage in the cardiomyopathic hamster, 180A
- Normalization of coronary flow reserve after successful angioplasty assessed with positron emission tomography, 218A
- Relative coronary flow reserve reflects stenosis severity more accurately than absolute flow reserve during changing aortic pressure and cardiac workload, 162A
- Warming up phenomenon cannot be explained by the increase in coronary flow reserve, 237A

#### Coronary occlusion

- Combined laser/thermal recanalization of peripheral artery occlusions, 13A
- Consequences of occlusion during PTCA, 230A Evaluation of left ventricular function immediately after successful balloon recanalization of chronic total coronary occlusions, 229A
- In vivo recanalization of total atherosclerotic arterial occlusions, 195A
- Quantitation of critically ischemic myocardial mass during acute coronary occlusion in vivo: measurement with positron emission tomography, 64A
- Radiofrequency thermal angioplasty for the treatment of peripheral vascular occlusive disease: preliminary results of a clinical trial, 14A
- Regional electrophysiological effects of stellate stimulation on infarcted myocardium, 128A
- Seismocardiography for detection of coronary artery occlusion during coronary angioplasty: a preliminary report, 43A

#### Coronary perfusion

- See also Echoperfusion; Coronary reperfusion Dipyridamole-induced malperfusion may not indicate ischemic ventricular dysfunction, 126A
- Impact of abnormal myocardial perfusion on ventricular function in patients with unstable angina, 239A
- Tomographic myocardial perfusion imaging with technetium-99m 2-methoxy isobutyl isonitrile (MIBI) and thallium-201: the sensitivity and reproducibility of semiquantitative assessments of myocardial perfusion and regional systolic function, 30A

#### Coronary reocclusion

Early thrombotic reocclusion after successful coronary thrombolysis is predictable from an increased thrombin release two hours after onset of therapy, 152A

## Coronary reperfusion

Assessment of "no reflow" phenomenon during reperfusion with <sup>99m</sup>Tc-MIBI and <sup>14</sup>C-deoxyglucose, 30A

- Coronary occlusion-reperfusion attenuates endothelium-mediated vascular response to leukotriene D<sub>4</sub> and acetylcholine, 143A
- Detection of hydroxyl radicals in the reperfused isolated monkey heart, 110A
- Early histopathology of reperfusion therapy for myocardial ischemia: study of 29 autopsied cases, 193A
- Early reperfusion after treatment with intravenous pro-urokinase when compared to intravenous streptokinase, 152A
- Effect of reperfusion on post-myocardial infarction aneurysm formation at one week, 110A
- Enhanced phosphoinositide metabolism during reperfusion of ischemic rat heart: a novel mechanism of reperfusion injury, 252A
- Observer variability in TIMI flow grading: comparison to a new computer method for measurement of reperfusion kinetics, 91A
- Overriding heightened risk, prior angina denoted a favorable response to myocardial reperfusion, 95A
- Pivotal role of multivessel coronary artery disease and the remote zone in the reperfusion era, 92A
- Preservation of myocardial function and topography by late reperfusion and long-acting superoxide dismutase therapy, 109A
- Serial changes in myocardial perfusion using tomographic technetium-99m methoxy isobutyl isonitrile (Tc-MIBI), 30A
- Time course of reperfusion induced reversal of early myocardial expansion, 109A
- Tomographic assessment of myocardial reperfusion during acute myocardial infarction using Tc-99m methoxy isobutyl isonitrile (MIBI), 153A

#### Coronary tone

Is atrial natriuretic factor involved in the modulation of coronary tone in man?, 186A

# Cost effectiveness

Cost-benefit advantage of primary scintigraphic evaluation after uncomplicated acute inferior wall myocardial infarction, 162A

#### Countershock

Effects of low energy direct current countershock on atrioventricular nodal junction in dog using suction-ablation catheter, 176A

# Cycle length alternans

Mechanism of significance of cycle length alternans during supraventricular tachycardia, 185A

#### Cyclosporine, cyclosporine A

- Cyclosporine and concomitant ketoconazole after cardiac transplantation: intermediate term findings and potential savings, 62A
- Cyclosporine in aviremic coxsackievirus B3 myocarditis in mice, 254A
- Cyclosporin therapy impairs endothelium-dependent relaxations in the renal circulation, 83A
- Cytomegalovirus infection in cardiac transplant recipients predicts the incidence of allograft atherosclerosis, 213A

- Effects of cyclosporine on serum lipoproteins, 41A
- Influence of antihypertensive therapy on plasma hormones in cardiac transplant recipients: measurements at rest and during exercise, 81A
- Prophylactic anti-rejection therapy early after cardiac transplantation: RATG versus OKT3, 62A
- Treatment of cardiac allograft rejection with pulsed steroids: a three year experience, 210A

#### Death

See also Sudden death

- Low maximum acceleration measured using aortic Doppler identified patients at risk of cardiac death following acute myocardial infarction, 157A
- Risk of death after nonfatal myocardial infarction in the VA cooperative study of coronary artery bypass surgery, 166A

#### Debridement

- High frequency (ultrasonic) mechanical debridement in the treatment of calcific aortic stenosis: an echocardiographic study, 214A
- Is ultrasonic debridement of aortic stenosis a reliable alternative to valve replacement?, 123A

#### Defect reversibility

Frequency of late defect reversibility in SPECT TL-201 stress redistribution studies, 28A

## Defibrillation

- Comparison of single and double capacitor biphasic waveforms for internal defibrillation, 67A
- Direct excitation of relatively refractory tissue by monophasic and biphasic shocks, 215A
- Does electrode polarity influence defibrillation efficacy for thoracotomy and non-thoracotomy internal defibrillation, 67A
- Effect of pericardial effusion on energy requirements for defibrillation using extrapericardial patch electrodes, 112A
- Effect of successful defibrillation on subsequent defibrillation threshold in a canine model of rapidly recurring cardiac arrest, 66A
- Increased defibrillation threshold and cardiac hypertrophy in a rapid pacing model of congestive heart failure in the dog, 67A
- Relationship between stimulation threshold variability of isolated cardiomyocytes and separated defibrillation shocks delivered in orthogonal directions, 177A
- Relationship of interpulse separation and defibrillation efficacy for biphasic waveforms, 216A
- Sequential pulse defibrillation in man: effects of lidocaine and verapamil, 216A
- Strength of monophasic and biphasic shocks that cause conduction block, 67A
- Triphasic waveforms increase defibrillation efficacy over biphasic waveforms with catheter/subcutaneous patch electrodes, 218A
- Ventricular fibrillation waveform characteristics associated with successful

defibrillation using fixed low energy DC shock, 216A

#### Defibrillator

See also Cardioverter defibrillator
Flexible and effective 3 electrode
non-thoracotomy defibrillation system in
man, 65A

Initial clinical experience: Endotak-implantable transvenous defibrillator system, 65A

Pacemaker/implantable defibrillator interactions: are they of clinical importance?, 66A

Use of gradient maps to create an electrode configuration with a more even defibrillation field, 66A

#### Defibrinogenation

Defibrinogenation reduces infarct size in a canine model of acute myocardial infarction, 125A

### 2-Deoxy-D-glucose

Validation of a tracer analogue method for the assessment of glucose metabolism in isolated working rat hearts, 103A

#### Diabetes

Painless myocardial ischemia in diabetic patients with coronary artery disease, 4A

#### Diastolic collapse

Long term characterization of left ventricular diastolic collapse dynamics post infarction, 48A

#### Diastolic function

Altered left ventricular diastolic filling due to acute right ventricular volume overload following tricuspid valvectomy. A pulsed Doppler echocardiographic study, 72A

Are Doppler indices of diastolic filling affected by left ventricular hypertrophy, 209A

Are Doppler indices more load sensitive than other measures of diastolic function?, 197A

Diastolic abnormalities in hypertension are not explained by LVH alone, 59A

Diltiazem improves diastolic function during hypoxia in hypertrophied rat hearts, 131A

Effect of atrial natriuretic on left ventricular diastolic function in humans with heart failure, 172A

Effect of early diastolic loading on myocardial relaxation in the intact canine left ventricle, 130A

Effects of exercise-induced ischemia in pressure-volume relations and filling dynamics in the conscious dog, 181A

Enhanced recovery of diastolic function after global myocardial ischemia in the intact animal, 130A

Evidence for an early increase in cardiac sympathetic stimulation in patients with diastolic dysfunction, 246A

Improved diastolic function after aortic valve replacement assessed by ultrafast computed tomography, 47A

Improvement of relaxation velocity by calcium blocker in aging rabbit myocardium, 57A

Left ventricular diastolic function—Doppler changes in early post cardiac transplant recipients, 99A

Left ventricular diastolic function in pheochromocytoma: relation to plasma catecholamines, 82A

Load dependence of reduced early diastolic

filling in left ventricular hypertrophy, 210A

Persistence of increased diastolic stiffness late following aortic valve replacement, 148A

Regional diastolic mechanics of ischemic and nonischemic areas in the pig heart, 131A

Relationship between the extent of muscular hypertrophy and diastolic function in patients with hypertrophic cardiomyopathy without left ventricular outflow gradients or mitral regurgitation, 89A

Respiratory influence on RV and LV diastolic filling in normal children, 205A

Shift of the left ventricular diastolic pressure-volume curve with ischemia: importance of volume and the pericardium, 207A

Stunned myocardium; evidence that diastolic ventricular dysfunction persists even after resolution of systolic dysfunction— experimental Doppler echocardiographic studies, 197A

Systolic shortening determines diastolic distensibility of ischemic myocardium during pacing induced angina and transluminal coronary occlusion, 80A

Ventricular diastolic interaction in intact dogs assessed by conductance catheters, 131A

#### Diatrizoate

Randomized trial of ionic versus non-ionic contrast for cardiac angiography: effect on complications and costs, 46A

## Dibenzepin

Electrophysiologic effects of a chemical defibrillatory agent: dibenzepin, 250A

#### Diet

Telephone-mail mediated dietary intervention for hypercholesterolemia, 134A

## Digitalis

Lack of correlation of ouabain binding sites and inotropic response to digitalis in experimental heart failure, 248A

# Digoxin

Flecainide acetate for the treatment of postoperative atrial arrhythmias, 164A Flecainide for heart rate control in atrial fibrillation, 164A

Increased exercise capacity in heart failure patients following digoxin administration, 183A

# Dilevalol

Antihypertensive therapy is improved by central effects of arterial dilation and reduced wave reflection, 244A

# Diltiazem

Age-related risk factors and mechanism of death following myocardial infarction. Experience from the multicenter diltiazem postinfarction trial, 27A

Amplification of diltiazem's effects on the AV node by rapid atrial input leads to selective actions during atrial fibrillation, 164A

Cocaine-induced contraction of vascular smooth muscle is inhibited by calcium channel blockade, 78A

Coronary spasm induced by stent implantation, 194A

Diltiazem improves diastolic function during hypoxia in hyperthyroid rat hearts, 131A

Effect of diltiazem on coronary flow reserve in man, 154A

Exercise training versus exercise training with diltiazem or propranolol: effects on lipids in men with mild hypertension, 241A

Exercise training versus exercise training with diltiazem or propranolol: effects on maximal oxygen uptake and exercise duration in men with mild hypertension, 241A

Exercise training versus exercise training with diltiazem or propranolol: effects on resting blood pressure in men with mild hypertension, 106A

Favorable effect of diltiazem on late mortality and reinfarction after non-Q wave myocardial infarction: Multicenter Diltiazem Post-Infarction Trial (MDPIT), 6A

Intracoronary diltiazem limits infarct size during prolonged angioplasty balloon inflation, 195A

Retrograde conduction properties determine rate-dependent efficacy of diltiazem for AV reentrant tachycardia, 251A

Role of electrocardiographic location of diltiazem treatment effect in non-Q wave myocardial infarction: Multicenter Diltiazem Post-Infarction Trial (MDPIT), 6A

## Dipyridamole

Detection of coronary stenoses by high speed NMR imaging: the utility of dysprosium-DTPA, 48A

Dipyridamole-Doppler echocardiography: comparison to thallium-201 imaging and quantitative coronary arteriography, 159A

Dipyridamole-induced malperfusion may not indicate ischemic ventricular dysfunction, 126A

Electrocardiographic changes during dipyridamole stress as potential markers of acute cardiac rejection, 88A

Experience with the intracoronary Doppler catheter in patients with clinical ischemic heart disease but normal or trivially diseased coronaries, 161A

High dose dipyridamole-echocardiography test in hypertensives: correlation with exercise-electrocardiography test in coronary arteriography, 103A

High dose dipyridamole-echocardiography test: large scale clinical trial, 158A

Insensitivity of thallium 201 imaging after oral dipyridamole for detection of reversible myocardial ischemia, 182A

Iodine-123, phenylpentadecanoid acid tomography following dipyridamole infusion for the detection of coronary artery disease, 99A

Is there an improvement in coronary vasodilator capacity after aortic valve replacement?, 147A

Normalization of coronary flow reserve after successful angioplasty assessed with positron emission tomography and H<sub>2</sub><sup>15</sup>O, 218A

Prognostic value of intravenous dipyridamole thallium imaging in asymptomatic patients with coronary disease and no previous myocardial infarction, 126A

Role of intravenous dipyridamole thallium imaging in preoperative cardiac risk assessment before renal transplantation, 161A

#### Disopyramide

- Combination of class IA and IB antiarrhythmic drugs markedly depresses Vmax with little change in the action potential duration in canine Purkinje fibers, 248A
- Disopyramide induces uterine contractions in pregnancy, 141A
- Intravenous flecainide versus intravenous disopyramide in the reversion of atrial fibrillation, 165A
- Safety, efficacy and predictive value of drug termination of ventricular tachycardia, 162A
- Short term variability of ventricular arrhythmia and rapid assessment of drug efficacy, 140 A
- Synergistic actions of disopyramide and lidocaine on Vmax of action potentials in guinea pig papillary muscles, 139A

#### Dissection

- Coronary angioplasty dissection: in-hospital outcome, 221A
- Determinants of arterial dissection during PTCA: lesion type versus inflation rate,
- Effect of epicardial accessory pathway ablation or endocardial dissection for AV nodal reentrant tachycardia on vagal innervation to the AV node, 232A

#### **Diuretics**

See also specific agent

Majority of physicians use drug therapy for isolated systolic hypertension, 13A

#### Dobutamine

- Accelerated arterial wave reflection with dopamine not dobutamine in congestive heart failure, 247A
- Demonstration of viable myocardium after acute infarction submitted to thrombolysis: comparison between positron emission tomography and dobutamine echocardiography, 192A

## Dopamine

- Accelerated arterial wave reflection with dopamine but not dobutamine in congestive heart failure, 247A
- β-adrenergic agonists in nonfailing, failing, and transplanted human hearts, 143A

#### Dopamine-1 receptor agonist

Neurohormonal activation limits the long-term response to the dopamine-1 receptor agonist, fendoldopam, in chronic heart failure, 246A

#### Dopexamine

- β-adrenergic agonists in nonfailing, failing, and transplanted hearts, 143A
- Tachyphylaxis associated with dopexamine administration in severe heart failure,

# Doppler color flow imaging

- Can color Doppler/two dimensional echocardiography identify the need for tricuspid valve repair?, 24A
- Consistency of color flow Doppler estimation of regurgitant flow rate across varying size orifices and multiple orifice

- communcations using flow convergence concepts, 22A
- Demonstration of jet entrainment—an interaction which causes parallel jets to merge and cross: in-vitro experiments using color Doppler flow mapping and optical visualization, 25A
- Diagnosis of left ventricular pseudoaneurysm by color Doppler flow mapping, 24A
- Do Doppler flow algorithms for mapping disturbed flow make sense?, 226A
- Does color Doppler echocardiography detect additional small muscular defects in infants with a large ventricular septal defect?, 206A
- Doppler color flow mapping of the "proximal isovelocity surface area": a new method for measuring volume blood flow across an orifice, 225A
- Evaluation of ventricular septal defect complicating acute myocardial infarction: identification, localization and differentiation from mitral regurgitation by Doppler color flow imaging, 209A
- Limitations of color Doppler in analysis of valvular regurgitation, 22A
- Overestimation of regurgitant jet area by transesophageal as compared to transthoracic color Doppler, 68A
- Quantification of acute aortic insufficiency with color Doppler flow mapping: in vitro studies in a flexible model of the left ventricle, 49A
- Quantitative evaluation of ventricular septal defect by color Doppler flow imaging, 24A
- Transesophageal 2D color-coded echocardiography during percutaneous transluminal coronary angioplasty, 68A
- Two dimensional/color Doppler assessment of ventricular septal defect, 24A
- Validation of a method to estimate regurgitant fractions using the power mode in a dog model, 23A
- Value and limitations of transesophageal color Doppler echocardiography for the recognition of transvalvular regurgitation in the normally functioning St. Jude valve, 210A

## Doppler ultrasound

- Are Doppler indices more load sensitive than other measures of left ventricular function?, 197A
- Are Doppler indices of diastolic filling affected by left ventricular hypertrophy?, 209A
- Differential effects of right ventricular pressure and volume loading on left ventricular filling assessed by Doppler echocardiography, 196A
- Dipyridamole-Doppler echocardiography: comparison to thallium-201 imaging and quantitative coronary arteriography, 159A
- Doppler harmonic spectral signals ("STRIPES"): in vivo and in vitro evidence of an artifact due to leaflet reverberations, 49A
- Evaluation of prosthetic valve performance by assessing the response to exercise using Doppler echocardiography, 233A
- Experience with the intracoronary Doppler catheter in patients with clinical ischemic

- heart disease but normal or trivially diseased coronaries, 161A
- Profile of a regurgitant color jet is independent of orifice shape, 23A
- Progression of aortic stenosis as assessed by echocardiography, 233A
- Pulsed Doppler echocardiographic mitral valve flow patterns and left ventricular chamber properties in patients with previous myocardial infarction, 209A
- Reduction of left ventricular preload produced by lower body negative pressures alters Doppler transmitral filling patterns, 197A
- Use of Doppler echocardiography in determination of left ventricular Dp/Dt MAX, 60A

#### Droperidol

Randomized controlled trial of neuroleptanalgesia infusion in the early treatment of acute myocardial infarction, 91A

## Dysprosium-DTPA

Detection of coronary stenosis by high-speed NMR imaging: the utility of dysprosium-DTPA, 48A

#### Ebstein's anomaly

Ebstein's anomaly of the fetus and neonate; anatomic details of prognostic importance, 135A

#### **Echocardiography**

- See also Doppler color flow imaging; Doppler ultrasound: Ultrasound
- Assessing infarct expansion in an echocardiographic wall motion index improved prediction of outcome after myocardial infarction, 27A
- Echocardiographic computed tomography of the heart: preliminary results, 224A
- Echocardiographic features of the transplanted heart in well patients one year post transplantation, 243A
- High dose dipyridamole-echocardiography test: large scale clinical trial, 158A
- Impact of intraoperative echocardiography: the first 1,000 patients, 23A
- Two to five year echocardiographic follow-up of patients with mitral valve prolapse: is apical four-chamber view displacement a precursor of abnormality, 226A

# Echocardiography, contrast

- Myocardial contrast echo washout curves: the influence of ischemia and hyperemia, 115A
- Myocardial contrast echocardiography can not be used to assess endocardial/epicardial blood flow ratio, 115A
- Reproducibility of washout curves derived from myocardial contrast echo, 115A

#### Echocardiography, exercise

- Echocardiographic assessment of mental stress induced wall motion abnormalities: comparison with exercise, 158A
- Exercise echocardiographic detection of coronary artery disease in women, 158A
- Physiologic significance of coronary lesions assessed by exercise echocardiography and quantitative coronary angiography, 158A

#### Echocardiography, three dimensional

New three-dimensional echocardiographic

- method for quantitating mitral valve prolapse, 227A
- Three-dimensional echocardiography: a feasible, non-invasive method to measure cardiac volume, 50A
- Transesophageal echo computer tomography: a new method for dynamic 3-D imaging of the heart, 68A

# Echocardiography, transesophageal

- Contribution of transesophageal echocardiography in the ultrasound assessment of percutaneous mitral valvuloplasty, 51A
- Detection of pulmonary artery thrombi by transesophageal echocardiography in patients with suspected pulmonary embolism, 224A
- Impact of transesophageal echocardiographic examinations: comparison between transthoracic and transesophageal approach, 51A
- Mitral prosthesis malfunction: utility of transesophageal echocardiography, 69A
- Safety of transesophageal echocardiography in awake patients: experience with 400 procedures, 225A
- Transesophageal echo, an improved diagnostic technique for sub-aortic membranes, 209A
- Transesophageal echo computer tomography: a new method for dynamic 3-D imaging of the heart, 68A
- Transesophageal echo in mitral prosthetic dysfunction: echo-surgical correlation, 69A
- Transthoracic versus transesophageal two-dimensional echo/Doppler flow imaging in surgical patients with mitral regurgitation, 68A
- Utility of transesophageal echocardiography in patients undergoing cardiac valve surgery,

# Echocardiography, two-dimensional

- Can color Doppler/two dimensional echocardiography identify the need for tricuspid valve repair, 24A
- Can hemodynamically significant RV infarction be identified by two-dimensional echocardiography?, 157A
- Intravascular real-time, high resolution two-dimensional echocardiography, 4A
- Progression of aortic stenosis as assessed by echocardiography, 233A
- Transthoracic two-dimensional ultrasonic high frequency (7.5 MHZ) visualization of the distal left anterior coronary artery, 116A
- Transthoracic versus transesophageal two-dimensional echo/Doppler flow imaging in surgical patients with mitral regurgitation, 68A
- Two-dimensional echocardiography can reduce hospital admissions for acute myocardial infarction by more than one-third: results of a prospective study performed in the emergency room, 159A

## Echoperfusion, contrast

Current myocardial perfusion echo methodology precludes an accurate assessment of coronary vascular reserve, 116A

#### **Ectopic activity**

Increased ventricular ectopic activity during

- ischemic episodes in ambulatory patients,
- Microprocessor based ECG analyzer and tone generator which permits immediate recognition and categorization of ectopic rhythms by sound, 188A

#### Edema

- Rapid-onset pulmonary edema in patients with left ventricular systolic dysfunction: a syndrome related to ventricular function, 179A
- Survival among patients with flash pulmonary edema: a retrospective review of surgical and medical management, 46A

#### **Ejection fraction**

- Ambulatory left ventricular function monitoring: are the ejection fraction measurements reproducible?, 96A
- Augmentation of ejection fraction during ambulatory monitoring in thrombolysis patients with concomitant silent ventricular dysfunction: mechanistic implications, 96A
- Evidence against a "myocardial factor" in rheumatic mitral stenosis, 147A
- Improvement in left ventricular ejection fraction during the first post-infarction year in patients with inferior and non-Q wave infarcts, 81A
- Natural history of left ventricular function changes after myocardial infarction, 25A
- Right and left ventricular response early and late after surgical relief of mitral regurgitation, 71A

## Elderly

- See also Age factors
- Aortic stenosis in the elderly: aortic balloon valvuloplasty vs. aortic valve replacement, 38A
- Cardiovascular risk of hypertension in the old old: the Bronx Longitudinal Aging Study,
- Decreased rejection in older cardiac transplant patients, 38A
- Exercise training alters catecholamine metabolism in healthy older men, 41A
- Risk factors for coronary mortality in elderly survivors of myocardial infarction: the Framingham Study, 37A
- Silent coronary artery disease in elderly men: low exercise tolerance is strongly associated with multivessel disease, 37A

## Electrocardiography

- See also specific wave; specific interval Absence of late potentials in patients with repetitive monomorphic and exercise-facilitated ventricular tachycardia and no apparent heart disease, 177A
- Complementary role of signal-averaged ECG and exercise testing in predicting cardiac events after myocardial infarction, 190A
- Effect of antiarrhythmic drugs on frequency-domain parameters of signal-averaged ECG, 191A
- Effect of exercise induced ischemia on signal averaged electrocardiogram, 191A
- Effect of thrombolysis on late potentials incidence after acute myocardial infarction, 178A
- Enhancing prediction of induced ventricular tachycardia in patients with non-sustained

- runs by the signal averaged electrocardiogram, 34A
- Late potential and noise level variability caused by bandpass versus high-pass filtering, and type of signal-averaging equipment, 188A

SUBJECT INDEX

- Microprocessor based ECG analyzer and tone generator which permits immediate recognition and categorization of ectopic rhythms by sound, 188A
- One heart, two bodies: insights, from the transplanted heart's new electrocardiogram, 243A
- Reproducibility of the signal-averaged ECG in the acute phase of myocardial infarction and at long term follow-up, 190A
- Right ventricular electrocardiographic abnormality in orthotopic heart transplant patients, 11A
- Role of electrocardiographic location on diltiazem treatment in non-Q wave myocardial infarction: multicenter diltiazem post-infarction trial (MDPIT),
- Signal-averaged electrocardiogram predicts arrhythmic events in patients with left bundle branch block, 190A
- Signal-averaged electrocardiographic abnormalities in non-affected first degree relatives of patients with hypertrophic cardiomyopathy, 190A
- Signal-averaged electrocardiographic differences between patients with non-myopathic left ventricular hypertrophy and patients with hypertrophic cardiomyopathy, 189A
- Time-dependent electrophysiologic changes after experimental myocardial infarction: parallel changes in inducibility of ventricular arrhythmias and the signal-averaged electrocardiogram, 22A

# Electrocardiography, ambulatory

- Does three channel ambulatory electrocardiographic monitoring increase detection of ischemia?, 189A
- Holter monitoring in the diagnosis of sleep apnea syndrome, 189A
- Silent ischemia on ambulatory ECG monitoring provides additional prognostic information in patients with stable angina and a positive exercise treadmill test, 202A
- ST analysis: intragroup versus intrapatient variability of Holter results, 189A

#### Electromechanical dissociation

Stunned myocardium: a form fruste of electromechanical dissociation, 90A

## Electrophysiologic studies

- Accelerated arterial wave reflection with dopamine but not dobutamine incongestive heart failure, 247A
- AV nodal reentry incorperating His bundle: verapamil sensitivity in retrograde fast pathway conduction, 173A
- Comparison of electrophysiologic responses to isoproterenol in the failing and nonfailing heart, 180A
- Delayed ventricular arrhythmias (phase 1B) resulting from midmyocardial reentry,
- Electrophysiologic testing in patients with asymptomatic nonsustained ventricular

- tachycardia predicts risk of sudden death or sustained ventricular tachycardia within the first year but not thereafter, 19A
- Mechanism and significance of cycle length alternans during supraventricular tachycardia, 185A
- Mechanism of compensatory pause in atrial fibrillation, 173A
- New quantitative method of sinoatrial nodal cells in sick sinus syndrome, 184A
- Periodicity of transmural and epicardial electrograms during sinus rhythm in patients with ventricular tachycardia, 191A
- Rate-dependent cellular uncoupling contributes to the conduction changes in acute ischemia and is prevented by verapamil, 127A
- Regional electrophysiological effects of stellate stimulation on infarcted myocardium, 128A
- Relation of inducibility of ventricular arrhythmias to symptoms in patients with hypertrophic cardiomyopathy—relevance of induced polymorphic ventricular tachycardia, 19A
- Role of electrophysiologic testing in patients with asymptomatic nonsustained ventricular tachycardia: relationship to ventricular function and its presence or absence of coronary artery disease, 19A
- Should the induction of nonsustained ventricular tachycardia during baseline electrophysiologic testing constitute a positive study?, 20A
- Sustained reentrant activation orients around arcs of abrupt functional conduction block in the canine post-infarction heart, 128A

## **Emboli**

- Acoustic filtration of gas microemboli in blood, 212A
- Deleterious effects of volume loading after acute pulmonary emboli, 86A
- Potential role of transesophageal echo in the definition of intracardiac sources of emboli in transient ischemic attacks, 38A

#### Embolization

Chronic effects of A-V nodal artery embolization, 233A

## Enalapril

- Cardiovascular hormones in relation to mortality in severe heart failure, 246A
- Effect of oral administration of antihypertensive agents on endothelium dependent and endothelium independent vascular relaxation, 83A
- Influence of antihypertensive therapy on plasma hormones in cardiac transplantation recipients: measurements at rest and during exercise, 81A

#### Encainide

- Combined therapy with Type 1C and type 1B agents: is it effective for ventricular tachycardia?, 141A
- Comparison of antiarrhythmic efficacy and safety of class Ia, 1b, and 1C agents in symptomatic and potentially malignant ventricular arrhythmia, 163A

#### Endarterectomy

Mechanical transluminal coronary

endarterectomy: initial clinical experience with the Auth mechanical rotary catheter, 227A

#### Endocarditis

Prediction of risk for complications in patients with left sided infectious endocarditis, 72A

#### Endothelin

- Effects of endothelin, a novel vasoconstrictor peptide, on the isolated human mesenteric arteries, 85A
- Endothelin constricts the systemic and coronary circulations and depresses ventricular function in vivo, 179A
- Endothelin is a potent constrictor of forearm resistance vessels and veins in man, 84A
- Endothelin is a potent constrictor of human coronary arteries in vitro, 85A
- Intracoronary endothelin infusion induces transmural myocardial ischemia in the dog, 84A
- Potent pressor effects of endothelin in spontaneously hypertensive rats and Wistar Kyoto rats, 83A

#### Endothelium

- Endothelial function influences the coronary vasomotor response to sympathetic stimulation in man, 202A
- Endothelium-dependent inhibition or ergonovine-induced contraction is impaired in porcine coronary arteries with regenerated endothelium, 31A
- Endothelium protects against contractions induced by histamine and serotinin in arterial, but not in venous coronary bypass grafts. 166A
- Persistent endothelial dysfunction following experimental angioplasty, 195A

#### Enoximone

- Acute and chronic response to oral enoximone in severe congestive heart failure: sustained hemodynamic improvement and preferential effect on right ventricular systolic performance, 101A
- Enoximone improves maximal and submaximal exertion in patients with chronic heart failure: a double-blind, placebo controlled trial, 247A
- Use of enoximone in cardiac transplant candidates: effect on  $\beta$  adrenergic receptors, 248A

#### Entrainment

Surface ECG and intracardiac findings with the onset of entrainment in a pacing model of pseudoentry ventricular tachycardia, 185A

## Epinephrine

- Exercise training alters catecholamine metabolism in healthy older men, 41A
- Prevention of halothane-epinephrine-induced cardiac arrhythmias with fructose 1-6 diphosphate, 139A
- Termination of epinephrine-induced ventricular tachycardia by adenosine in halothane-anesthetized dogs, 249A

#### Ergonovin

- Comparison of acetylcholine and ergonovine in the provocation of coronary vasospasm, 132A
- Endothelium-dependent inhibition or ergonovine-induced contraction is

- impaired in porcine coronary arteries with regenerated endothelium, 31A
- Ergonovine testing in cocaine induced myocardial ischemia, 79A
- Hypersensitivity of coronary arteries to intracoronary ergonovine following orthotopic cardiac transplantation, 188A

#### Esmolol

Abnormal QT/QS<sub>2</sub> ratio at rest and exercise in Romano-Ward long QT patients, normalized by beta-blocker therapy, 11A

#### Estroger

Effect of estrogen replacement and coronary artery disease on survival in postmenopausal women, 12A

#### Exercise

- Comparison of exercise protocols: evaluation of oxygen uptake kinetics in heart failure, 242A
- Excessive ventilatory responses to carbon dioxide production during exercise in patients with congestive heart failure, 242A
- Oscillatory shifts in oxygen uptake diminish the functional relevance of gas exchange measurements during exercise in chronic heart failure, 241A

## **Exercise testing**

- See also Echocardiography, exercise; Seismocardiography
- Abnormal tissue glycogen depletion patterns during submaximal exercise in rats with a chronic myocardial infarction and heart failure, 40A
- Comparison of effects of prolonged exercise on the right and left ventricles, 182A
- Complementary role of signal-averaged ECG and exercise testing in predicting cardiac events after myocardial infarction, 190A
- Computer analysis reduces incidence of false positive exercise tests in middle aged women, 126A
- Detection of restenosis after elective coronary angioplasty using the exercise treadmill test, 236A
- Development of physiologic exercise heart rate responses after cardiac transplantation, 184A
- Diagnostic strategies based on clinical and exercise variables: liberation from Bayes's theorem?, 182A
- Does ambulatory ST segment monitoring confer added information to that of exercise testing in the investigation of patients with coronary artery disease—a study of 227 patients, 34A
- Effect of cold upon ischemic threshold in patients with stable angina: magnitude and mechanism, 184A
- Effect of combined dynamic exercise and head-out water immersion on atrial natriuretic peptide, 41A
- Effects of exercise induced ischemia on the signal averaged electrocardiogram, 191A
- Enoximone improves maximal and submaximal exertion in patients with chronic heart failure: a double-blind placebo controlled trial, 247A
- Exercise test results predict silent ischemia on ambulatory monitoring, 3A
- Importance of analyzing inspiratory gases

- when calculating oxygen consumption and carbon dioxide production during exercise, 119A
- Increased exercise capacity in heart failure patients following digoxin administration, 183A
- Initial clinical experience with a dual chamber rate modulated pacemaker, 112A
- Insensitivity of thallium-201 imaging after oral dipyridamole for detection of reversible myocardial ischemia, 182A
- Left ventricular isovolumic contraction period vanishes during intense exercise, 102A
- Patterns and determinants of exercise performance in Fontan patients, 135A
- Prognostic implications of nuclear exercise tests in an unselected outpatient population, 97A
- Reduced exercise capacity of chronic obstructive pulmonary disease patients exercising with noseclip/mouthpiece: decreased right heart preload?, 183A
- Relation between ischemia during exercise and ambulatory ischemic activity in coronary artery disease, 3A
- Resting and supine exercise hemodynamics improve 1 and 2 years after orthotopic cardiac transplantation, 100A
- Risk assessment after myocardial infarction ruled out, 184A
- Use of the exercise test to predict prognosis after coronary artery bypass surgery, 183A

# **Exercise training**

- Catecholamine metabolic pathways and exercise training: plasma and urine catecholamines, metabolic enzymes, and chromogranin A, 182A
- Exercise training alters catecholamine metabolism in healthy older men, 41A
- Exercise training versus exercise training with diltiazem or propranolol: effects on lipids in men with mild hypertension, 241A
- Exercise training versus exercise training with diltiazem or propranolol: effects on maximal oxygen uptake and exercise duration in men with mild hypertension, 241A
- Exercise training versus exercise training with diltiazem or propranolol: effects on resting blood pressure in men with mild hypertension, 106A
- Training level comparison study: factors influencing exercise capacity, 183A

## F-18 deoxyglucose

Significance of exercise ST-segment elevation in patients with Q wave anterior myocardial infarction: evaluation by positron emission tomography, 203A

## F-18 metaraminol

F-18 metaraminol uptake as marker for neuronal function in post-ischemic canine myocardium, 64A

## Fallot's tetralogy

See Tetralogy of Fallot

#### Fatty acid

Impaired fatty acid metabolism in postischemic canine myocardium: a time course study with positron emission tomography, 63A Membrane incorporation of unsaturated fatty

- acids increased LDL metabolism by U937 monocytes, 32A
- Relation of modified fatty acid uptake to wall motion and coronary anatomy, 29A

#### Felodipine

Treatment of hypertension alters the relationship between platelet calcium and sensitivity to aggregatory agents, 104A

#### Fenoldopam

Neurohormonal activation limits the long-term response to the dopamine-1 receptor agonist, fenoldopam, in chronic heart failure, 246A

#### Fentany

Randomized controlled trial of neuroleptanalgesia infusion in the early treatment of acute myocardial infarction, 91 A

#### Fibrin

Aspirin but not standard heparin prevents thrombus deposition in rabbits treated with tissue plasminogen activator, 77A

#### Fibrinylitic activity

Comparison of the effect of upright posture and platelet aggregability and fibrinolytic activity, 93A

#### Fibrinolytic therapy

See also Thrombolytic therapy

- Dose response relationship of RT-PA infusion to induction of systemic fibrin (ogen) olysis of the NHLBI thrombolysis in myocardial infarction (TIMI-II) trial, 198A
- Patients with ST segment deviation and unstable angina have consistent increases in thrombin activity, 15A

## Fibrinopeptide A

Serial urinary fibrinopeptide A levels in unstable ischemic heart disease, 238A

## Fibroblast growth factors

Growth factors identified in myocardium of patients with hypertrophic cardiomyopathy, 118A

## **Fibrosis**

Myocardial stiffness and reparative fibrosis following coronary embolization in the rat, 1A

#### **Filtration**

Acoustic filtration of gas microemboli in blood, 212A

## Fish oil

- Absorption and effect on platelet function from single dose concentrated fish oil compared with tunafish, 12A
- Dietary supplementation with fish oil prevents coronary occlusion by thrombus formation, 195A
- Regression of atherosclerosis in cholesterol fed rabbits: effects of fish oil and verapamil, 196A

#### Fistulae

Coronary artery to right ventricular fistulae in heart transplant recipients: a complication of endomyocardial biopsy, 243A

# Flagyl

Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A

# Flecainide, flecainide acetate

Combined therapy with Type 1C and 1B agents: is it effective for ventricular tachycardia?, 141A

- Comparison of flecainide vs procainamide in depressing retrograde conduction in atrioventricular nodal reentry tachycardia, 165A
- Effects of flecainide on action potential duration of human atrial fibers, 140A
- Flecainide acetate for the treatment of postoperative atrial arrhythmias, 164A
- Flecainide for heart rate control in atrial fibrillation, 164A
- Flecainide for prevention of paroxysmal atrial fibrillation and flutter. A multicenter, double-blind, placebo-controlled crossover study, 164A
- Intravenous flecainide versus intravenous disopyramide in the reversion of atrial fibrillation, 165A
- Plasma and heart tissue levels of flecainide after single versus multiple doses: is there a rationale for intermittent use?, 144A
- Safety, efficacy and predictive value of drug termination of ventricular tachycardia, 162A
- Safety and efficacy of oral flecainide therapy in patients with the Wolff-Parkinson-White syndrome, 204A
- Short term variability of ventricular arrhythmia and rapid assessment of drug efficacy, 140A
- Use-dependent prolongation of ventricular tachycardia cycle length by type 1A and 1C drugs, 21A

#### Flosequinan

Effects of flosequinan on metabolic and ventilatory parameters during submaximal exercise in cardiac failure, 181A

## 2-Fluoro-2-deoxy-D glucose

Validation of a tracer analogue method for the assessment of glucose metabolism in isolated working rat heart, 103A

#### Fructose 1-6 diphosphate

Prevention of halothane-epinephrine-induced cardiac arrhythmias with fructose 1-6 diphosphate, 139A

## Furosemide

Influence of antihypertensive therapy on plasma hormones in cardiac transplant recipients: measurements at rest and during exercise, 81A

#### Gadolinium-DTPA

- Improved assessment of acute myocardial infarction by magnetic resonance imaging and gadolinium-DTPA, 49A
- Magnetic resonance imaging in ischemic injury following cardiac transplant in rats, 200A
- Magnetic resonance imaging with gadolinium-DTPA in man for detection of acute myocardial infarction with occluded and reperfused vessels, 201A

## Gene expression

Delayed switch of myosin heavy chain gene expression in the right ventricle after experimental infarction in the rat, 125A

#### Glucose

- Hypoxia and glucose deprivation independently induce uncoupling of  $\alpha_1$  adrenergic signal transduction in cultured myocardial cells, 252A
- Independent effects of hypoxia and glucose deprivation on the  $\beta$ -adrenoceptor-cyclase

system in cultured neonatal rat ventricular myocytes, 142A

Quantitative positron tomography demonstrates accelerated glucose utilization relative to flow in ischemic human myocardium, 63A

Validation of a tracer analogue method for the assessment of glucose metabolism in isolated working rat hearts, 103A

#### Glutaraldehyde

Long term prevention of bioprosthetic heart valve calcification: A1<sup>+++</sup> pretreatment, 136A

#### Glutathione

Model for congestive heart failure: selenium and vitamin E deficient mini pigs, 208A Protective effects of glutathione on compliance and coronary resistance, 90A

#### Glyburide

Effects of glyburide on ischemia-induced changes in extracellular potassium and local myocardial activation: a novel antiarrhythmic mechanism, 142A

#### Glycogen

Abnormal tissue glycogen depletion patterns during submaximal exercise in rats with a chronic myocardial infarction and heart failure, 40A

#### Gorlin formula

Gorlin formula for aortic valve orifice area validated in vitro, 73A

Gorlin formula: is the traditional method of calculating the pressure gradient accurate?, 73A

## Grafts

See also Surgery, coronary artery bypass Comparison of the Gorlin, Cannon, Angel and Hakki equations for the determination of pathologic stenosis in porcine xenografts, 123A

Direct argon laser irradiation of high-grade stenosis and total occlusions in native human coronary arteries and bypass grafts: initial clinical experience, 60A

Endothelium protects against contractions induced by histamine and serotinin in arterial, but not in venous coronary bypass grafts, 166A

Internal mammary artery graft angioplasty: clinical and angiographic follow-up, 221A

Oxidative metabolism during cardiac allograft rejection studied by NADH laser fluorimetry, 102A

Percutaneous transluminal angioplasty of internal mammary artery bypass grafts, 221 A

Percutaneous transluminal angioplasty of left internal mammary artery grafts using a femoral approach, 221A

Preoperative aspirin is not necessary to achieve improved vein graft patency after coronary artery bypass surgery, 165A

Repair of complex congenital heart disease with the use of valved conduit, 211A

Stent implantation for the treatment of coronary artery bypass graft stenosis, 107A

Treatment of cardiac allograft rejection with pulsed steroids: a three year experience, 210A

#### Granulocytes

Granulocyte activation augments hypoxia-induced pulmonary hypertension in vivo, 151A

## Guanine nucleotide binding proteins

Exercise alters guanine nucleotide binding proteins, 40A

## Guanine nucleotide regulatory protein

Alterations in the catalyst of adenylate cyclase and the inhibitory guanine nucleotide regulatory protein in experimental heart failure, 179A

#### Guanosine monophosphate

Antithrombotic action of nitroglycerin: cyclic GMP as a potential mediator, 231A

Effect of cholinergic carbachol and cyclic guanosine monophosphate on sudden cardiac death: protection from ventricular fibrillation, 91A

#### HA-1077

New intracellular calcium antagonist, HA-1077, an isoquinoline derivative, inhibits quiescent bovine arterial smooth muscle cell proliferation, 153A

#### Halothane

Prevention of halothane-epinephrine-induced cardiac arrhythmias with fructose 1-6 diphosphate, 139A

Termination of epinephrine-induced ventricular tachycardia by adenosine in halothane-anesthetized dogs, 249A

## Heart block

Effects of different pacing modes on right atrial pressure and atrial natriuretic peptide in patients with atrioventricular block, 217A

Is complete heart block in inferior myocardial infarction a benign phenomenon following reperfusion therapy?, 26A

#### Heart failure

See Congestive heart failure

# Helicopter transport

#### See Air transport Hemodynamics

Do hemodynamics overestimate the results of balloon mitral valvuloplasty?, 114A

Effect of inhibition of arginine vasopressin on systemic and coronary hemodynamics,

Relationship of ventriculo-arterial coupling to neurohumoral mechanisms in heart failure, 245A

#### Hemopump

See Ventricular assist device

## Hemorrhage

See Bleeding

# Heparin

Aspirin but not standard heparin prevents thrombin fibrin deposition in patients treated with tissue plasminogen activator,

Coronary thrombolysis with urokinase preactivated intravenous pro-urokinase,

Dose response relationship of RT-PA infusion to induction of systemic fibrin (ogen) olysis in the NHLBI thrombolysis in myocardial infarction (TIMI)-II) trial, 198A

Effect of low dose aspirin on the incidence and hematological activity of left ventricular

thrombosis in patients with anterior myocardial infarction, 199A

Effects of urokinase and heparin on lesion geometry in unstable angina, 15A

Growth factors identified in myocardium of patients with hypertrophic cardiomyopathy, 118A

Heparin protentiates the thrombolytic efficacy of pro-urokinase, 198A

Improvement of global and regional left ventricular function with intravenous APSAC in acute myocardial infarction. Results of a multicenter double blind trial, 26A

Overview of bleeding risk from the TAMI trials: two agents are better than one, 198A

Prediction and prevention of myocardial infarction during the acute phase of unstable angina, 192A

Prevention of thrombosis by recombinant hirudin during arterial angioplasty in pigs: comparison with heparin, 77A

Reduction of infarct size by intravenous APSAC in myocardial infarction (multicenter randomized trial vs. heparin), 95A

Thrombin inhibition by hirudin decreases platelet thrombus growth on areas of severe vessel wall injury, 145A

Tissue plasminogen activator for unstable angina pectoris: a multicenter, randomized, double-blind, placebo-controlled trial, 191A

## Hibernation

Endocardial trabeculation: a marker for hibernating myocardium, 80A

Time course of improved function following postinfarction angioplasty: evidence for "hibernation" even in "infarcted" myocardium, 25A

# Hibernation induction trigger

Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A

## Hirudin

Prevention of thrombosis by recombinant hirudin during arterial angioplasty in pigs: comparison with heparin, 77A

Thrombin inhibition by hirudin decreases platelet thrombus growth on areas of severe vessel wall injury, 145A

# His-Purkinje system

His-Purkinje activation during ventricular tachycardia: a determinant of QRS duration, 21A

## Histamine

Endothelium protects against contractions induced by histamine and serotonin in arterial, but not venous coronary bypass grafts, 166A

Genetically-induced atherosclerosis attenuates endothelial mediated relaxation, 32A

Ionic mechanisms underlying positive chronotropic effects of histamine on the rabbit atrioventricular node, 143A

# Holter monitoring

See Electrocardiography, ambulatory

## Hormones

Influence of antihypertensive therapy on plasma hormones in cardiac transplant

recipients: measurements at rest and during exercise, 81A

#### Hydralazine

- Does acute pharmacologic stimulation of stunned myocardium have chronic deleterious effects?, 219A
- Effect of oral administration of antihypertensive agents on endothelium dependent and endothelium independent vascular relaxation, 83A

# Hypercholesterolemia

- Hyperlipidemic valvulopathy: aortic regurgitation in familial hypercholesterolemia studied by color Doppler echocardiography, 73A
- Platelet deposition in areas of stenosis is stimulated by high plasma cholesterol levels, 145A
- Telephone-mail mediated dietary intervention for hypercholesterolemia, 134A

#### Hyperconstriction

Angiographic demonstration of hyperconstriction induced by serotonin and aggregating platelets in porcine coronary arteries with regenerated endothelium, 31A

#### Hyperkinesis

Beta adrenergic blockade blunts compensatory hyperkinesis during acute infarction, 100A

#### Hyperparathyroidism

Blood pressure, left ventricular mass and intracellular calcium in primary hyperparathyroidism, 82A

# Hypertension

- ANF blunts forearm vasoconstriction to lower body negative pressure in essential hypertensive patients, 83A
- Atrial natriuretic peptide and elevated right heart pressures in essential hypertension, 81A
- Captopril pretreatment and myocardial fibrosis and stiffness in renovascular hypertension, 82A
- Cardiovascular risk of hypertension in the old old: the Bronx Longitudinal Aging Study. 37A
- Cardiovascular risk reduction through worksite health promotion, 134A
- Comparison of pharmacological and nonpharmacologic treatment of hypertension. A randomized placebo controlled study, 104A
- Concentric remodeling of the left ventricule in hypertensive patients with normal ventricular mass, 245A
- Concurrent compliance reduction and increased resistance in the manifestation of isolated systolic hypertension, 244A
- Coupling of left ventricular load and hypertrophy in hypertension, 104A
- Decreased adrenergic response in hypertensive patients without left ventricular hypertrophy, 82A
- Diastolic abnormalities in hypertension, are not explained by LVH alone, 59A
- Echo/Doppler and catheterization correlated of survival in primary pulmonary hypertension, 151A
- Exercise training versus exercise training with diltiazem or propranolol: effects on lipids in men with mild hypertension, 241A

- Exercise training versus exercise training with diltiazem or propranolol: effects on maximum oxygen uptake and exercise duration in men with mild hypertension. 241A
- Exercise training versus exercise training with diltiazem or propranolol: effects on resting blood pressure in men with mild hypertension, 106A
- Granulocyte activation augments hypoxia-induced pulmonary hypertension in vivo, 151A
- High dose dipyridamole-echocardiography test in hypertensives: correlation with exercise-electrocardiography test and coronary arteriography, 103A
- Incidence of serious ventricular arrhythmias during surgery in hypertensives with left ventricular hypertrophy, 105A
- Is digital vasoconstriction a marker for reversible pulmonary vasoconstriction in patients with pulmonary hypertension, 151A
- Is lung transplantation feasible in patients with pulmonary hypertension?, 211A
- Late electrophysiologic sequelae of experimental right ventriculotomy with right ventricular hypertension, 170A
- Left ventricular diastolic function in pheochromocytoma: relation to plasma catecholamines, 82A
- Majority of physicians use drug therapy for isolated systolic hypertension, 13A
- Microproteinemia—an early marker for target orgfan damage in essential hypertension, 105A
- Noninvasive assessment of arterial compliance in patients with systemic hypertension,
- Potent pressor effects of endothelin in spontaneously hypertensive rate and Wistar Kyoto rats, 83A
- Prognosis of obesity-related hypertension: Framingham Study, 104A
- Relationship between left ventricular mass regression and improved left ventricular filing in severe hypertension. 244A
- Relationship of ventriculo-arterial coupling to neurohumoral mechanisms in heart failure, 245A
- Spontaneous progression and regression of concentric hypertrophy in patients with borderline (BOH) or mild hypertension (M1H), 245A
- Transient myocardial ischemia in hypertensive coronary microangiopathy, 84A
- Treatment of hypertension alters the relationship between platelet calcium and sensitivity to aggregatory agents, 104A
- Ventricular arrhythmias in patients with essential hypertension, 105A

## Hyperthyroidism

Left ventricular systolic pressure-volume area and oxygen consumption of hyper- and hypothyroid rats, 87A

## Hypertrophy

See also Cardiomyopathy

Are Doppler indices of diastolic filling affected by left ventricular hypertrophy?, 209A Coronary artery disease is associated with

- inadequate left ventricular hypertrophy in aortic stenosis, 81A
- Coupling of left ventricular load and hypertrophy in hypertension, 104A
- Effect of decreased afterload on Doppler indices of left ventricular filling in pressure overload hypertrophy, 51A
- Effects of short- and long-term hypertensive cardiac hypertrophy on the structural properties of the coronary resistance vessels, 187A
- Incidence of serious ventricular arrhythmias during surgery in hypertensives with left ventricular hypertrophy, 105A
- Increased defibrillation threshold and cardiac hypertrophy in a rapid pacing model of congestive heart failure, 67A
- Is there an improvement in coronary vasodilator capacity after aortic valve replacement?, 147A
- Left ventricular pseudo hypertrophy in pericardial effusion: a sign of cardiac tamponade, 235A
- Load dependence of reduced early diastolic filling in left ventricular hypertrophy, 210A
- Oxygen consumption during exercise in the pressure-overloaded hypertrophied heart, 1874
- Reperfusion associated ventricular fibrillation: potentiation by left ventricular hypertrophy despite lidocaine pretreatment, 127A
- Risk of ventricular arrhythmias according to anatomic categories of left ventricular hypertrophy, 105A
- Signal-averaged electrocardiographic differences between patients with non-myopathic left ventricular hypertrophy and patients with hypertrophic cardiomyopathy, 189A
- Spontaneous progression and regression of concentric hypertrophy in patients with borderline (BOH) or mild hypertension, 245A
- Suppression of cardiac protein degradation contributes to progressive hypertrophy due to aortic regurgitation, 71A
- Variability of negative T wave in left ventricular hypertrophy, the possible result of contraction-excitation feedback, 35A

#### Hypothyroidism

Left ventricular systolic pressure-volume area and oxygen consumption of hyper- and hypothyroid rabbits, 87A

# Hypoxia

- Diltiazem improves diastolic function during hypoxia in hypertrophied rat hearts, 131A
- Independent effects of hypoxia and glucose deprivation on the β-adrenorreceptoradenylate cyclase system in cultured rat ventricular myocytes, 142A
- Mechanisms of electrotonic uncoupling of myocardium induced by hypoxia, 130A
- Quinidine myocardial pharmacokinetics and pharmacodynamics: influence of hypoxia, 138 A

## I-123 meta-iodobenzylguanidine

Prognosis of congestive heart failure (CHF) evaluated by I-123 meta-

iodobenzylguanidine (MIBG) myocardial imaging, 180A

# 125-I iodocyanopinodol

Portrayal of cardiac beta-receptors in living animals, 64A

#### **Imipramine**

Effect of antiarrhythmic drugs on frequency-domain parameters of signal-averaged ECG, 191A

#### **Immunoglobulins**

Myocardial IgA deposition: a possible marker for alcohol related myocardial disease, 254A

#### Indium-111

Predictive value of In-111 antimyosin uptake for improvement of left ventricular wall motion after thrombolysis in acute myocardial infarction, 97A

#### Indomethacin

Effect of oral administration of antihypertensive agents on endothelium dependent and endothelium independent vascular relaxation, 83A

#### Infection

See also Sepsis

Cytomegalovirus infection in cardiac transplant recipients predicts the incidence of allograft atherosclerosis, 213A

Predictors of deep sternal wound infections after cardiac surgery, 122A

#### Inosine

Improvement of post-ischemic myocardial metabolism and function by inosine in 31P-MRS study, 103A

#### Insulin

Hibernation induction triggers extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A

## Interleukin-2

Reversible cardiac depression caused by the supernatant of lymphocytes cultured with interleukin-2, 207A

# Internal mammary artery

See also under Grafts

Implantation of the internal mammary artery as a means of myocardial revascularization in a canine model of myocardial ischemia: a reassessment, 187A

Noninvasive evaluation of the internal mammary artery by ultrasonic duplex-scanning, 116A

#### Iodamidol

Randomized trial of ionic versus non-ionic contrast for cardiac angiography: effect on complications and costs, 46A

# Iodine-123 phenylpentadecanoic acid

Iodine-123 phenylpentadecanoic acid tomography following dipyridamole infusion for the detection of coronary artery disease, 99A

#### Indopindolol

Enhanced beta-adrenergic receptor function in symptomatic mitral valve prolapse, 146A

#### Iohexo

Nephrotoxicity of nonionic contrast media: importance of dosage in high risk patients, 47A

## Ischemia

See also Myocardial ischemia; Silent defects Analysis of the ischemia related coronary

- artery and its predictive value in unstable angina, 238A
- Assessment of ischemia during occlusion and reperfusion using methoxy-isobutyl isonitrile, 29A
- Differences in distribution of beta-blockers in infarcted porcine hearts. A study with positron emission tomography (PET), 64A
- Dipyridamole-induced malperfusion may not indicate ischemic ventricular dysfunction, 126A
- Discordance between radionuclide, Doppler echo, angiographic and ambulatory markers of ischemia, 2A
- Does ambulatory ST segment monitoring confer added information to that of exercise testing in the investigation of patients with coronary artery disease, 34A
- Does three channel ambulatory electrocardiographic monitoring increase detection of ischemia?, 189A
- Effect of cold upon ischemic threshold in patients with stable angina: magnitude and mechanism, 184A
- Effects of exercise-induced ischemia in pressure volume relations and filling dynamics in the conscious dog, 181A
- Effects of glyburide on ischemia-induced changes in extracellular potassium and local myocardial activation: a novel antiarrhythmic mechanism, 142A
- Improvement of post-ischemic myocardial metabolism and function by inosine in 31P-MRS study, 103A
- Increased ventricular ectopic activity during ischemic episodes in ambulatory patients, 33A
- Independent effects of hypoxia and glucose deprivation on the β-adrenoreceptoradenylate glycase system in cultured neonatal rat ventricular myocytes, 142A
- Ischemic threshold varies in response to different types of exercise in patients with chronic stable angina, 237A
- Ischemic ventricular fibrillation is distinguished by preserved histamine-stimulated adenyl cyclase activity, 90A
- Magnetic resonance imaging in ischemic injury following cardiac transplant in rats, 200A
- Post-ischemic oxygen radical production detected by chemiluminescence varies with duration of ischemia, 109A
- Preservation of ventricular performance with reduced ischemic dysfunction by intravenous nisoldipine during rapid atrial pacing, 46A
- Rate-dependent cellular uncoupling contributes to the conduction changes in acute ischemia and is prevented by verapamil, 127A
- Regional diastolic mechanics of ischemic and nonischemic areas in the pig heart, 131A
- Relation between ischemia during exercise and ambulatory ischemic activity in coronary artery disease, 3A
- Serial urinary fibrinopeptide A levels in unstable ischemic heart disease, 238A
- Shift of the left ventricular diastolic pressure-volume curve with ischemia: importance of volume and the pericardium, 207A

Time-averaged phosphorus-31 NMR spectroscopy of the metabolic response to hemodynamically equivalent pacing-induced and flow-limited ischemia in the conscious dog, 219A

## Isobutyl-1-methylxanthine

Genetically-induced atherosclerosis attentuates endothelially mediated relaxation, 32A

#### Isoproterenol

- Autonomic influence on ventricular subsidiary pacemakers: a study of patients post AV nodal ablation, 232A
- β-adrenergic agonists in nonfailing, failing, and transplanted human hearts, 143A
- Comparison of electrophysiologic responses to isoproterenol in the failing and nonfailing heart, 180A
- Decreased adrenergic response in hypertensive patients without left ventricular hypertrophy, 82A
- Enhanced beta-adrenergic receptor function in symptomatic mitral valve prolapse, 146A
- Enhanced cardiac adrenergic response in cardiomyopathic hamster at a pre-congestive failure stage, 87A
- Termination of epinephrine-induced ventricular tachycardia by adenosine in halothane-anesthetized dogs, 249A

#### Isosorbide dinitrate

- Effects of nitrates on coronary hemodynamics and anginal threshold in syndrome X, 155A, 201A
- Newly developed nitroglycerin patch with "phased released", 231A
- Oral isosorbide dinitrite in chronic heart failure: tolerance development to QID vs TID regimen, 178A

# Isosorbide-5-mononitrate

Evidence for antithrombotic properties of nitrate-vasodilators in vivo but not in vitro, 231A

## Jets

- Demonstration of jet entrainment—an interaction which causes parallel jets to merge and cross: in-vitro experiments using color Doppler flow mapping and optical visualization, 25A
- Effect of receiving chamber compliance on the spatial distribution of regurgitant jets as imaged by color Doppler flow mapping: an in-vitro study, 23A
- How turbulent is a turbulent jet? An in vitro color flow Doppler study, 22A
- Profile of a regurgitant color jet is independent of orifice shape, 23A
- Validation in physiologic pulsatile flow of a new method for noninvasive quantification of valvular regurgitation based on conservation of momentum, 73A

#### Kawasaki disease

Coronary blood flow and hemodynamics during exercise after the coronary artery bypass grafting with the internal mammary artery for Kawasaki disease, 74A

#### Ketanserin

Ketanserin prevents acute occlusion but not restenosis after PTCA, 44A

#### Ketoconazole

Cyclosporine and concomitant ketoconazole after çardiac transplantation: intermediate term findings and potential savings, 62A

#### Labetolol

Anithypertensive therapy is improved by central effects of arterial dilation and reduced wave reflection, 244A

#### Lactate

Alterations in the ventilatory anaerobic threshold after a chronic intervention reflect changes in lactate production during exercise in heart failure, 39A

Temporal dissociation between invasive and non-invasive determination of anaerobic threshold in chronic heart failure, 39A

#### Lasers

Arterial color flow duplex sonography of the lower extremities before and after excimer laser angiography, 149A

Characteristics of patients requiring epicardial vs endocardial Nd:YAG laser photoablation for ventricular tachycardia—three year study, 121A

Combined laser/thermal recanalization of peripheral artery occlusions, 13A

Comparative effects of radiofrequency and laser ablation in normal and diseased ventricular myocardium, 175A

Contrasting effects of continuous wave pulsed laser irradiation on vasoreactivity of atherosclerotic vessels in vitro, 14A

Direct argon laser irradiation of high-grade stenosis and total occlusions in native human coronary arteries and bypass grafts: initial clinical experience, 60A

Early clinical experience with percutaneous transluminal argon laser coronary angioplasty, 61A

Electrophysiologic effects of argon laser irradiation during intraoperative atrioventricular node or accessory pathway ablation in man, 169A

Enhanced recognition of plaque composition in vivo using laser excited fluorescence spectroscopy, 54A

Excimer laser irradiation induces endothelium-independent relaxation of vascular smooth muscle, 141A

Guided percutaneous pulsed laser angioplasty: results and follow-up, 13A

Human percutaneous laser-assisted coronary angioplasty: efforts to reduce spasm and thrombosis, 61A

In-vitro comparison of excimer laser and an argon laser heated probe, 53A

In vivo photosensitizer enhanced laser angioplasty in atherosclerotic Yucatan miniswine. 43A

"Laser wire" for percutaneous angioplasty complete peripheral and coronary arterial occlusions—initial clinical results, 60A

Mechanism responsible for laser-induced photorelaxation of vascular smooth muscle is limited to ultraviolet and visible wavelengths, 142A

Percutaneous coronary excimer laser angioplasty in animals and humans, 61A

Percutaneous coronary laser balloon angioplasty: preliminary results of a multicenter trial, 61A

Percutaneous laser angioplasty of peripheral atherosclerotic obstructions by the Unicorn-Cap (Tm) probe system: a multicenter study 14A

#### Late potentials

Late potentials and noise level variability caused by bandpass versus high-pass filtering, and type of signal-averaging equipment, 188A

Prognostic value of late potentials in hypertrophic cardiomyopathy, 35A

#### Latissimus dorsi muscle

Evidence of lattissimus dorsi muscle adaptation before cardiomyoplasty, 214A

#### Leukocytes

Vascular responses to leukocyte products in atherosclerotic primates, 2A

#### Leukotrienes

Coronary occlusion-reperfusion attenuated endothelium-mediated vascular response to leukotriene D<sub>4</sub> and acetylcholine, 143A

## Lidocaine

Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil and class I agents, 249A

Combination of class IA and IB antiarrhythmic drugs markedly depresses  $V_{\text{max}}$  with little change in the action potential duration in canine Purkinje fibers, 248A

Developmental changes in lidocaine action occur at neutral but not acidic pH, 250A

Reperfusion associated ventricular fibrillation: potentiation by left ventricular hypertrophy despite lidocaine pretreatment, 127A

Safety, efficacy and predictive value of drug termination of ventricular tachycardia, 162A

Sequential pulse defibrillation in man: effects of lidocaine and verapamil, 216A

Short term variability of ventricular arrhythmia and rapid assessment of drug efficacy, 140A

Synergistic actions of disopyramide and lidocaine on V<sub>max</sub> of action potentials in guinea pig papillary muscles, 139A

# Lipids

See also Phospholipid

Exercise training versus exercise training with diltiazem or propranolol: effects on lipids in men with mild hypertension, 241A

Induction by LDL of growth related metabolism in vascular smooth muscle cells, 84A

NMR lipid imaging: a new strategy for assessing the myocardial ischemic insult, 200A

## Lipoproteins

Effects of cyclosporine on serum lipoproteins, 41A

#### Loading conditions

Altered left ventricular diastolic filling due to acute right ventricular volume overload following tricuspid valvulectomy. A pulsed Doppler echocardiographic study, 72 A

Brachial artery pressure measurements underestimate beneficial effects of nitroglycerin on left ventricular afterload.

Coupling of left ventricular load and hypertrophy in hypertension, 104A

Deleterious effects of volume loading after acute pulmonary embolism, 86A

Effect of decreased afterload on Doppler indices of left ventricular filling in pressure overload hypertrophy, 51A

Heterogeneity of regional motion and shape in response to altered load, 101A

Insignificance of "load dependence" on left ventricular relaxation and filling, 220A

Lack of inotropic effect on atrial natriuretic factor in humans with heart failure: demonstration by left ventricular end-systolic-pressure volume analysis, 9A

Load dependence of reduced early diastolic filling in left ventricular hypertrophy,

Percent wall thickening is preload dependent at low but not high levels of afterload, 219A

Percutaneous left atrial-femoral artery bypass with a pulsatile pump: initial experience in cardiogenic shock, 53A

Reduced exercise capacity of chronic obstructive pulmonary disease patients exercising with noseclip/mouthpiece: decreased right heart preload, 183A

Reduction of left ventricular preload produced by lower body negative pressure alters Doppler transmitral filling patterns, 197A

## Lung transplantation

Is lung transplantation feasible in patients with pulmonary hypertension, 211A

#### Lymphocytes

Alterations in lymphocyte subsets and catecholamines in congestive heart failure, 180A

Diagnostic applications of lymphocyte cultures from heart allograft biopsies, 62A

Reversible cardiac depression caused by the supernatant of lymphocytes cultured with interleukin-2, 207A

T lymphocyte subsets as the noninvasive marker of hypertrophy, 88A

#### Mahaim fibers

Further support of the atrio-ventricular localization of so-called "mahaim fibers," 232A

#### Mannitol

Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A

#### Mapping procedures

Activation pattern during induction and maintenance of ventricular tachycardia in patients with coronary artery disease, 167A

Endocardial isochronal patterns near the ventricular tachycardia site of origin with orthogonal electrode catheter array, 167A

Epicardial mapping of rate-dependent ventricular conduction slowing by procainamide, 251A

Fatal and non fatal recurrences after endocardial resection: role of the underlying etiology, 212A

Non-invasive assessment of improvement of regional left ventricular contractility after percutaneous transluminal coronary angioplasty by QRST isoarea map in patients with angina pectoris, 177A Transmural ventricular activation during

consecutive cycles of sustained ventricular tachycardia, 167A

Use of gradient maps to create an electrode configuration with a more even defibrillation field, 66A

#### Marfan syndrome

Impact of medical and surgical therapy on the cardiovascular prognosis of the Marfan syndrome in early childhood, 119A

## Media

See also Culture media

Compensatory coronary dilatation and media thinning: adaptive responses to progressive atherosclerosis, 196A

Media thinning of severely diseased coronary arteries: guidelines for new interventional procedures, 194A

## Menopause

Effect of estrogen replacement and coronary artery disease on survival in postmenopausal women, 12A

#### Meperidine

Randomized controlled trial of neuroleptanalgesia infusion in the early treatment of acute myocardial infarction, 91A

#### Metabolism

Glucose metabolism in stunned reperfused myocardium, 102A

Identification of transient regional myocardial metabolic abnormalities in patients with chronic stable angina using positron emission tomography (PET), 45A

Improvement of post-ischemic myocardial metabolism and function by inosine in 31P-MRS study, 103A

Induction by LDL of growth related metabolism in vascular smooth muscle cells, 84A

Oxidative metabolism during cardiac allograft rejection studied by NADH laser fluorimetry, 102A

Possible difference of metabolical condition in patients with dilated cardiomyopathy and severe coronary artery disease: evaluation of positron emission tomography, 103A

Recovery of myocardial metabolism by PET precedes improvement of ischemic wall motion after PTCA, 28A

# Methionine

Methionine reverses tolerance to transdermal nitroglycerin, 230A

#### Methoxy-isobutyl isonitrile

Assessment of ischemia during occlusion and reperfusion using methoxy-isobutyl isonitrile. 29A

#### Metoprolol

Beta adrenergic blockade blunts compensatory hyperkinesis during acute infarction, 100A

Differences in distribution of beta-blockers in infarcted porcine hearts. A study with positron emission tomography, 64A

Effects of combined low doses of quinidine and metoprolol on inducible ventricular arrhythmias in a chronic canine infarct model, 248A

Treatment of hypertension alters the relationship between platelet calcium and sensitivity to aggregatory agents, 104A

#### Mexiletine

Combination of class IA and IB antiarrhythmic

drugs markedly depresses Vmax with little change in the action potential duration in canine Purkinje fibers, 248A

Comparison of antiarrhythmic efficacy and safety of class 1A, 1B, and 1C agents in symptomatic and potentially malignant ventricular arrhythmias, 163A

Effect of antiarrhythmic drugs on frequency-domain parameters of signal-averaged ECG, 191A

Prodysrhythmia of O-demethyl encainide: suppression by combination with mexiletine, 140A

#### Microprocessors

Microprocessor based on ECG analyzer and tone generator which permits immediate recognition and categorization of ectopic rhythms by sound, 188A

#### Microproteinemia

Microproteinemia—an early marker for target organ damage in essential hypertension, 105A

## Mitochondrial function

Post-hypoperfusion reperfusion: orchestrated recovery from myocardial supply/demand imbalance maximizes heart function, 90A

#### Mitral valve area

Gorlin formula: is the traditional method of calculating the pressure gradient accurate?, 73A

Systemic errors in the Doppler pressure half-time formula for mitral orifice area, 234A

## Mitral valve disease

See also Stenosis

Comparison of long-term hemodynamic evaluation between percutaneous mitral valvuloplasty and mitral valvular replacement for severe mitral stenosis, 19A

Direct imaging of the papillary muscles during ischemia: implications for ischemic mitral regurgitation, 156A

Does myocardial involvement in children with severe mitral regurgitation (MR) due to active rheumatic carditis (ARC) influence the outcome of mitral valve replacement (MVR)?, 146A

Enhanced beta-adrenergic receptor function in symptomatic mitral valve prolapse, 146A

Features of severe mitral regurgitation following percutaneous balloon commissurotomy, 55A

New three-dimensional echocardiographic method for quantitating mitral valve prolapse, 227A

Pathogenesis of systolic anterior motion of the mitral valve—can the papillary-mitral apparatus play a primary role clinically?,

Percutaneous mitral valvotomy using the double balloon technique: determinant factors of mitral regurgitation, 69A

Prevalence and direction of mitral regurgitation in hypertrophic cardiomyopathy, 89A

Right and left ventricular response early and late after surgical relief of mitral regurgitation, 71A

Serial assessment of mitral regurgitation in patients undergoing aortic valvuloplasty, 50A

Six month follow-up of mitral balloon valvuloplasty, 17A

Surgical fate of mitral regurgitation associated with severe aortic stenosis: an intraoperative echo study, 72A

Transthoracic versus transesophageal two-dimensional echo/Doppler flow imaging in surgical patients with mitral regurgitation, 68A

Two to five year echocardiographic follow-up of patients with mitral valve prolapse: is apical four-chamber view displacement a precursor of abnormality?, 226A

Utility of left ventricular elastance for predicting surgical outcome in patients with mitral regurgitation, 71A

Variability in mitral regurgitant jet area size during systole and its relation to mitral regurgitation severity, 50A

#### Molsidomine

Evidence for antithrombotic properties of nitrate-vasodilators in vivo but not in vitro, 231A

#### Morphologic studies

Quantitative analysis of coronary artery morphology using intracoronary high frequency ultrasound: validation by histology and quantitative coronary arteriography, 228A

#### Murmur

Cystic medical necrosis of the aorta: natural history and long-term follow-up, 122A

# Myocardial disease

See also specific disease

Myocardial IgA deposition: a possible marker for alcohol related myocardial disease,

## Myocardial energetics

Myocardial metabolic to mechanical energy transfer characteristics from single vena caval occlusions in conscious dogs, 87A

# Myocardial factor

Evidence against a "myocardial factor" in rheumatic mitral stenosis, 147A

## Myocardial function

Depressed myocardial function and ventricular wall stress in neural crest ablated chick embryos, 118A

Preservation of myocardial function and topography by late reperfusion and long-acting superoxide dismutase therapy, 109A

Preservation of myocardial function by a coronary perfusion catheter, 52A

Recovery of regional myocardial function after successful coronary angioplasty early after a non-Q-wave myocardial infarction, 7A

Superoxide dismutase (SOD) prevents reperfusion-induced deterioration in coronary vasodilator reserve (CVR) and regional myocardial function, 110A

#### Myocardial hibernation

See Hibernation

# Myocardial infarction

See also Coronary occlusion
Abnormal Doppler left ventricular filling
following acute myocardial infarction and

changes during early recovery, 157A
Acute outcome and long term follow-up of
patients with acute myocardial infarction

- and single vessel disease treated with angioplasty without thrombolytic therapy, 94A
- Age-related risk factors and mechanism of death following myocardial infarction. Experience from the multicenter diltiazem postinfarction trial, 27A
- Assessing infarct expansion in an echocardiographic wall motion index improves prediction of outcome after myocardial infarction, 27A
- Atrial natriuretic factor in patients with right ventricular infarction, 93A
- Bimodal time course of collateral development in acute myocardial infarction, 45A
- Chronic reduction of left ventricular volumes at rest and exercise in patients treated with nitroglycerin following anterior MI, 25A
- Climatologic variables and acute myocardial infarction: a time course study, 133A
- Coffee use and acute myocardial infarction, 36A
- Coronary anatomy preceding non-Q wave myocardial infarction, 6A
- Delayed switch of myosin heavy chain expression in the right ventricle after experimental infarction in the rat, 125A
- Early intervention with low dose aspirin in first acute transmural myocardial infarction: infarct size, clinical outcome and follow-up, 27A
- Economic advantage of a conservative strategy for AMI management: rt-PA without obligatory PTCA, 152A
- Effect of thrombolysis on late potentials incidence after acute myocardial infarction, 178A
- Evaluation of ventricular septal defect complicating acute myocardial infarction: identification, localization and differentiation from mitral regurgitation by color Doppler flow imaging, 209A
- Fate of acute myocardial infarction patients with successful mechanical (rescue) vs. chemical patency of the infarct vessel at emergency catheterization, 192A
- Favorable effect of diltiazem on late mortality and reinfarction after non-Q wave myocardial infarction: Multicenter Diltiazem Post-Infarction Trial (MDPIT), 6A
- Functional left ventricular aneurysm after anterior Q-wave myocardial infarction: incidence, contributing factors and natural history, 45A
- Improved assessment of acute myocardial infarction by magnetic resonance imaging and gadolinium-DTPA, 49A
- Improvement in left ventricular ejection fraction during the first post-infarction year in patients with inferior and non-Q wave infarcts, 81A
- Increased morning incidence of myocardial infarction: experience in the ISIS-2 trial,
- Is complete heart block in inferior infarction a benign phenomenon following reperfusion therapy?, 26A
- Lack of association between early administration of thrombolytic therapy

- and the development of non-Q wave myocardial infarction, 6A
- Long term characterization of left ventricular diastolic collapse dynamics post infarction, 48A
- Long-term (4 year) follow-up after percutaneous transluminal coronary angioplasty during acute myocardial infarction, 94A
- Mechanism of myocardial infarction in patients with prior coronary bypass surgery: therapeutic implications, 93A
- Morphometric mapping of regional differences in myocyte diameters after healing of myocardial infarction, 125A
- Myocardial infarction complicating elective coronary bypass surgery, 166A
- Myocardial infarction with minimal coronary atherosclerosis: a syndrome of young women with guarded long term prognosis, 27A
- Natural history of left ventricular function changes after myocardial infarction, 25A
- Non-invasive determination of cardiac output during acute myocardial infarction using electrical bioimpedence cardiography, 102A
- Non-invasive identification of viable versus infarcted myocardium by automated three-dimensional cardiac positron emission tomography with generator produced rubidiium-82, 29A
- Nuclear magnetic imaging with gadolinium-DTPA in man for detection of acute myocardial infarction with occluded and reperfused vessels, 201A
- Observer variability in TIMI flow grading: comparison to a new computer method for measurement of reperfusion kinetics, 91A
- Prediction and prevention of myocardial infarction during the acute phase of unstable angina, 192A
- Prehospital thrombolytic therapy—MITI project report on phase I: feasibility, characteristics of patients, 152A
- Prior beta blocker therapy improves 28 day post infarction survival, 12A
- Prognostic significance of first myocardial infarction type (Q-wave vs non Q-wave), 5A
- Randomized controlled trial of neuroleptanalgesia infusion in the early treatment of acute myocardial infarction, 91A
- Recent exposure to cigarette smoke increases myocardial infarct size, 124A
- Reduction of infarct size by intravenous APSAC in myocardial infarction (multicenter randomized trial vs heparin), 95A
- Regional electrophysiological effects of stellate stimulation on infarcted myocardium, 128A
- Reproducibility of the signal-averaged ECG in the acute phase of myocardial infarction and at long term follow-up, 190A
- Reverse redistribution following myocardial infarction is related to severity of coronary stenosis, 99A
- Risk factors for coronary mortality in elderly

- survivors of myocardial infarction: the Framingham study, 37A
- Risk of death after nonfatal myocardial infarction in the VA cooperative study of coronary artery bypass surgery, 166A
- Role of electrocardiographic location on diltiazem treatment effect in non-Q wave myocardial infarction: Multicenter Diltiazem Post-Infarction Trial (MDPIT), 6A
- Selective neurohumoral activation in the recovery phase of anterior myocardial infarction in man, 92A
- Significance of exercise-induced ST segment elevation in patients with Q wave anterior myocardial infarction: evaluation by positron emission tomography, 203A
- Thrombolysis-induced limitation of infarct size in relation to time of pain onset and infarct localization: results from the I.S.A.M. study, 95A
- Thrombolytic therapy in unstable angina and non Q wave myocardial infarction: a randomized trial of urokinase versus aspirin. 15A
- Time course of reperfusion induced reversal of early myocardial expansion, 109A
- Time of onset of acute myocardial infarction (AMI) after awakening, 133A
- Two-dimensional echocardiography can reduce hospital admissions for acute myocardial infarction by more than one-third: results of a prospective study performed in the emergency room, 159A
- Two-year post-discharge survival after emergency coronary angioplasty for myocardial infarction: importance of the timing and success of angioplasty, 193A Myocardial ischemia
  - Chronic amiodarone administration protects against global myocardial ischemia in the rat, 250A
  - Clinical application of ultrasonic backscatter in transesophageal echo to detect ischemic myocardium, 226A
  - Direct administration of recombinant superoxide dismutase significantly preserves myocardial function and mitochondrial structures after 30 minutes normothermic global ischemia, 63A
  - Early histopathology of reperfusion therapy for myocardial ischemia: study of 29 autopsied cases, 193A
  - Ergonovine testing in cocaine induced myocardial ischemia, 79A
  - Experience with the intracoronary Doppler catheter in patients with clinical ischemic heart disease but normal or trivially diseased coronaries, 161A
  - Extent of jeopardized myocardium: importance of location, severity and extent of coronary stenosis, 44A
  - F-18 metaraminol uptake as marker for neuronal function in post-ischemic canine myocardium, 64A
  - Histological evidence of coronary atherosclerosis as a cause of myocardial ischemia in patients with normal coronary arteriograms, 150A
  - Identification of transient regional myocardial metabolic abnormalities in patients with

- chronic stable angina using positron emission tomography (PET), 45A
- Impaired fatty acid metabolism in postischemic canine myocardium: a time course with positron emission tomography, 63A
- Insensitivity of thallium 201 imaging after oral dipyridamole for detection of reversible myocardial ischemia, 182A
- Intracoronary endothelium infusion induces transmural myocardial ischemia in the dog, 84A
- Long-term follow-up and variability of markers of myocardial ischemia in syndrome X,
- Modification of myocardial ischemia and dysfunction by nifedipine and nitroglycerin during coronary occlusion. 154A
- Neutrophil function in ischemic heart disease, 44A
- Oxidation of sulfhydryl groups of serum albumin in coronary artery diseases, 44A
- Painless myocardial ischemia in diabetic patients with coronary artery disease, 4A
- Quantitation of critically ischemic myocardial mass during acute coronary occlusion in vivo: measurement with positron emission tomography, 64A
- Quantitative positron tomography demonstrates accelerated glucose utilization relative to flow in ischemic human myocardium, 63A
- R and S wave amplitude changes with acute transmural ischemia, 10B
- Sarcolemmal phospholipid turnover: a critical mediator of myocardial injury, 252A
- Simultaneous cardiac mechanics and myocardial phosphorus-31 NMR energetics during global ischemia & reperfusion in the closed-chest conscious dog, 200A
- Systolic shortening determines diastolic distensibility of ischemic myocardium during pacing induced angina and transluminal coronary occlusion, 80A
- Therapy of painful and painless ischemia in 348 patients: results of the nifedipine total ischemia awareness program, 3A
- Transient myocardial ischemia in hypertensive coronary microangiopathy, 84A
- Transmurally localized 31 MRS: metabolic heterogeneity during regional ischemia, 199A

## Myocardial metabolism

See Metabolism

# Myocardial relaxation

See Relaxation

## Myocardial rupture

Myocardial rupture complicating tissue plasminogen activator therapy of acute myocardial infarction, 94A

#### Myocardial salvage

- Assessment of myocardial viability with technetium-99m 2-methoxy isobutyl isonitrile (MIBI) and gated tomography in patients with coronary artery disease, 31A
- Early post-thrombolysis assessment of necrosis and viability with rest-redistribution thallium scintigraphy: correlation with positron emission tomography (PET), 28A Increase in myocardial salvage by combining

- coronary sinus occlusion and retroperfusion, 53A
- Non-invasive identification of viable versus infarcted myocardium by automated three-dimensional cardiac positron emission tomography with generator produced rubidium-82, 29A

#### Myocarditis

- Cyclosporine in aviremic coxsackievirus B3 myocarditis in mice, 254A
- Insensitivity of right ventricular endomyocardial biopsy in the diagnosis of myocarditis: whither the gold standard?, 253A
- Porcine model of myocarditis leading to dilated cardiomyopathy, 253A
- Sharing of antigenic determinants between coxsackie B3 virus and autoantigens in viral myocarditis and dilative cardiomyopathy, 253A

#### Myocardium, immature

Electrophysiologic and histopathologic comparison between apical and transepicardial septal ventricular pacing in the immature canine myocardium: evaluation of a new method, 110A

#### Myocardium, stiff

Myocardial stiffness and reparative fibrosis following coronary embolization, 1A

#### Myocardium, stunned

- Demonstration of viable myocardium after an acute infarction submitted to thrombolysis: comparison between positron emission tomography and dobutamine echocardiography, 192A
- Does acute pharmacologic stimulation of stunned myocardium have chronic deleterious effects?, 219A
- Effect of α-tocopherol (vitamin E) on regional function in stunned myocardium, 144A
- Glucose metabolism in stunned reperfused myocardium, 102A
- Stunned myocardium: a form fruste of electromechanical dissociation, 90A
- Stunned myocardium: evidence that diastolic ventricular dysfunction persists after resolution of systolic dysfunctionexperimental Doppler echocardiographic studies, 197A

- Morphometric mapping of regional differences in myocyte diameters after healing of myocardial infarction, 125A
- Relationship between stimulation threshold variability of isolated cardiomyocytes and separated defibrillation shocks delivered in orthogonal directions, 177A

#### Myosin heavy chain

Delayed switch of myosin heavy chain gene expression in the right ventricle after experimental infarction in the rat, 125A

#### Myosin light chains

Biphasic release of myosin light chains in patients with successful thrombolysis in acute myocardial infarction, 95A

# Myotonic dystrophy

Prevalence of cardiac abnormalities in a large kindred with myotonic dystrophy, 89A

## N-acetylcysteine

N-acetylcysteine potentiates IV nitroglycerin in inhibiting periodic platelet thrombus

formation in stenosed dog coronary arteries, 145A

#### Necrosis

Cystic medial necrosis of the aorta: natural history and long-term follow-up, 122A

#### Neural crest

Noncardiac defects associated with conotruncal abnormalities-further implications of neural crest influence, 118A

#### Neurohumoral activation

Selective neurohumoral activation in the recovery phase of anterior myocardial infarction in man, 92A

#### Neuroleptanalgesia

Randomized controlled trial of neuroleptanalgesia infusion in the early treatment of acute myocardial infarction,

#### Neuronal function

F-18 metaraminol uptake as marker for neuronal function in post-ischemic canine myocardium, 64A

#### Neutrophil function

Neutrophil function in ischemic heart disease,

#### Nicardipine

Negative inotropic effect of nicardipine in patients with heart failure: demonstration by left ventricular end-systolic pressure-volume analysis, 178A

#### Nifedipine

- Cocaine-induced contraction of vascular smooth muscle is inhibited by calcium channel blockade, 78A
- Coronary spasm induced by stent implantation, 194 A
- Effects of low dose nifedipine administrated through the coronary sinus in ischemic heart disease, 153A
- Improvement of relaxation velocity by calcium blocker in aging rabbit myocardium, 57A
- Modification of myocardial ischemia and dysfunction by nifedipine and nitroglycerin during coronary occlusion, 154A
- Nifedipine does not alter the venodilatory response to nitroglycerine, 154A
- Nifedipine in unstable angina: beneficial effects in the elderly and in patients with reduced left ventricular function, 239A
- Therapy of painful and painless myocardial ischemia in 348 patients: results of the nifedipine total ischemia awareness program, 3A
- Treatment of hypertension alters the relationship between platelet calcium and sensitivity to aggregatory agents, 104A

## Nisoldinine

- Improvement of relaxation velocity by calcium blocker in aging rabbit myocardium, 57A
- Preservation of ventricular performance with reduced ischemic dysfunction by ventricular nisoldipine during rapid atrial pacing, 46A

# **Nitrates**

- Evidence for antithromnbotic properties of nitrate-vasodilators in vivo but not in vitro, 231A
- Myocardial infarction with minimal coronary atherosclerosis: a syndrome of young

women with guarded long term prognosis, 27A

Nifedipine in unstable angina: beneficial effects in the elderly and in patients with reduced left ventricular function, 239A

#### Nitric oxide

- Evidence for antithrombotic properties of nitrate-vasodilators in vivo but not in vitro, 231A
- Preserved flow-mediated vasodilation despite acetylcholine-induced vasoconstriction in atherosclerotic coronary arteries in man, 132A

#### Nitrogen-13 ammonia

- Nitrogen-13 ammonia myocardial uptake at rest with exercise in normal volunteers: quantification of coronary flow with dynamic positron emission tomography, 97A
- Significance of exercise-induced ST-segment elevation in patients with Q wave anterior myocardial infarction: evaluation by positron emission tomography, 203A

## Nitroglycerin

- Antithrombotic action of nitroglycerin: cyclic GMP as a potential mediator, 231A
- Antithrombotic therapy: is the combination of aspirin and nitroglycerin beneficial?, 145A
- Biphasic response of coronary blood flow to intracoronary nitroglycerin in normal subjects, 230A
- Brachial artery pressure measurements underestimate beneficial effects of nitroglycerin on left ventricular overload, 231A
- Chronic reduction of left ventricular volumes at rest and exercise in patients treated with nitroglycerin following anterior MI, 25A
- Coronary spasm induced by stent implantation, 194A
- Intravenous nitroglycerin prevents coronary artery vasoconstriction after PTCA, 59A
- Methionine reversed tolerance to transdermal nitroglycerin, 230A
- Modification of myocardial ischemia and dysfunction by nifedipine and nitroglycerin curing coronary occlusion, 154A
- N-acetylcysteine potentiates IV nitroglycerin in inhibiting periodic platelet thrombus formation in stenosed dog coronary arteries, 145A
- Newly developed nitroglycerin patch with 'phased release,' 231A
- Nifedipine does not alter the venodilatory response to nitroglycerin, 154A

#### Nitroprusside

- Effect of oral administration of antihypertensive agents on endothelium dependent and endothelium independent vascular relaxation, 83A
- Evidence for antithrombotic properties of nitrate-vasodilators in vivo but not in vitro, 231A
- Persistent endothelial dysfunction following experimental angioplasty, 195A
- Response to nitroprusside—predictor of early post transplant mortality, 62A

#### Noradrenaline

Cardiovascular hormones in relation to mortality in severe heart failure, 246A Genetically-induced atherosclerosis attenuates endothelially mediated relaxation, 32A

#### Norepinephrine

- Differences in neurohumoral activation in patients with left ventricular dysfunction with and without heart failure, 246A
- Exercise training alters catecholamine metabolism in healthy older men, 41A
- F-18 metaraminol uptake as marker for neuronal function in post-ischemic canine myocardium, 64A
- Independent effects of hypoxia and glucose deprivation on the β-adrenoreceptoradenylate cyclase system in cultured neonatal rat ventricular myocytes, 142A
- Persistent endothelial dysfunction following experimental angioplasty, 195A

## Nuclear magnetic resonance imaging

See also Spectroscopy

- Detection of myocardial hemorrhage using <sup>1</sup>H NMR imaging at 1.5T, 48A
- Evaluation of aortic regurgitation by cine magnetic resonance imaging comparing cineangiography, 201A
- Improved assessment of acute myocardial infarction by magnetic resonance imaging and gadolinium DTPA, 49A
- Magnetic resonance imaging in ischemic injury following cardiac transplantation, 200A
- Magnetic resonance imaging with gadolinium-DTPA in man for detection of acute myocardial infarction with occluded and reperfused vessels, 201A
- NMR lipid imaging: a new strategy for assessing the myocardial ischemic insult, 200A
- Simultaneous cardiac mechanics and myocardial phosphorus-31 NMR energetics during global ischemia & reperfusion in the closed-chest conscious dog, 200A

## O-demethyl encainide

Prodysrhythmia of O-demethyl encainide: suppression by combination with mexiletine, 140A

#### Obesity

Prognosis of obesity-related hypertension: Framingham Study, 104A

# OKT3

Prophylactic anti-rejection therapy early after cardiac transplantation, 62A

#### Ouabain

Lack of correlation of ouabain binding sites and inotropic response to digitalis in experimental heart failure, 248A

## Oxfenicine

Glucose metabolism in stunned reperfused myocardium, 102A

#### Oxygen consumption

- Importance of analyzing inspiratory gases when calculating oxygen consumption and carbon dioxide production during exercise, 119A
- In vivo assessment of the independent effects of heart rate, contractility and systolic loading conditions on myocardial oxygen consumption, 101A
- Left ventricular systolic pressure-volume area

- and oxygen consumption of hyper-and hypothyroid rabbits, 87A
- Oxygen consumption during exercise in the pressure-overloaded hypertrophied heart, 187A

## Oxygen radical

Detection of hydroxyl radicals in the reperfused isolated monkey heart, 110A Post-ischemic oxygen radical production detected by chemiluminescence varies with duration of ischemia, 109A

#### Oxygen saturation

Acute clinical testing and follow-up of a rate-variable pacemaker controlled by central venous oxygen saturation, 112A

#### Oxygen uptake

- Comparison of exercise protocols: evaluation of oxygen uptake kinetics in heart failure, 242A
- Oscillatory shifts in oxygen uptake diminish the functional relevance of gas exchange measurements during exercise in chronic heart failure. 241A

#### Oxygenation

In vivo near infrared monitoring of myocardial oxygenation during ischemia and reperfusion, 251A

#### Oxygenators

Cardiac resuscitation by extracorporeal pump oxygenator (ECPO) after failure of precordial compression, 220A

#### Pacemaker

- Acute clinical testing and follow-up of a rate-variable pacemaker controlled by central venous oxygen saturation, 112A
- Autonomic influence on ventricular subsidiary pacemakers: a study of patients post AV nodal ablation, 232A
- Double blind cross-over study on the symptomatology and quality of life in patients with rate responsive pacemakers, 113A
- Impaired activity rate responsiveness of atrial Actrivitax II pacemakers, 215A
- Initial clinical experience with a dual chamber rate modulation pacemaker, 112A
- Initial experience with automatic slope settings for Meta MV and Rhythmyx rate responsive pacemakers, 113A
- Investigation of a new activity sensing rate responsive dual chamber pacemaker, 112A
- Pacemaker/implantable defibrillator interactions: are they of clinical importance?, 66A
- Response of rate-adaptive pacemakers to physiological stimuli other than isotonic exercise: comparison of six different sensors, 215A
- Unique upper rate behaviors in dual chamber, rate modulated pacemakers, 113A

# Pacemaker syndrome

Pacemaker syndrome is associated with very high plasma concentrations of atrial natriuretic peptide (ANP), 111A

# **Pacing**

- Effect of atrial contraction and synchroneity of cardiac contraction on ventriculo-arterial coupling, 206A
- Effect of cardiac pacing mode on the long-term development of atrial fibrillation, 217A

- Effects of different pacing modes on right atrial pressure and atrial natriuretic peptide in patients with atrioventricular block, 217A
- Electrophysiologic and histopathologic comparison between apical and transepicardial septal ventricular pacing in the immature canine myocardium: evaluation of a new method, 110A
- Is atrial activation beneficial in heart transplant recipients?, 111A
- Prohormone atrial natriuretic peptides 1-30, 31-67, and 99-126 increase in proportion to right ventricular pacing rate, 217A
- Spontaneous changes in ventricular tachycardia cycle length: relevance to antitachycardia device development, 111A

#### Palmitate oxidation

Mechanical function and palmitate oxidation in the neonatal piglet heart during normothermic ischemia and reperfusion,

#### Papaverin

Preserved flow-mediated vasodilation despite acetylcholine-induced vasoconstriction in atherosclerotic coronary arteries in man,

#### Papillary muscle

Direct tracing of the papillary muscle during ischemia: implications for ischemic mitral regurgitation, 156A

## Parasympathectomy

'Up-regulation" of GTP binding proteins following cardiac parasympathectomyquantitation by immunoblot method, 143A

## Parasympathetic cardiac control

Chronic impairment of parasympathetic cardiac control in heavy smokers, 36A

## Pediatric cardiology

- See also Congenital heart defects: specific disease; Surgery, pediatric
- Cardiopulmonary exercise response in adolescents following cardiac transplantation, 135A
- Characterization of the phasic responses of the neonatal sinus and atrioventricular node to brief vagal stimulation, 138A
- Does myocardial involvement in children with severe mitral regurgitation (MR) due to active rheumatic carditis (ARC) influence the outcome of mitral valve replacement (MVR)?, 146A
- Early experience with pulmonary autograft use for aortic valve replacement in pediatric patients, 120A
- Effects of position and exercise on the QT interval in children, 171A
- Evidence of enhanced contractility in normal infants compared to older children and adults, 135A
- Experimental animal investigations of the potential for new approaches to diagnostic cardiac imaging in infants and small premature infants from intracardiac and transesophageal approaches using a 20MHz real time ultrasound imaging catheter, 137A
- Family history predictors of high blood cholesterol levels in 4th grade school children, 36A
- Fate of the neoaortic valve after arterial repair of transposition of the great arteries, 240A

- Ischemic time and graft function in human infant cardiac transplantation, 120A
- Linear growth in pediatric cardiac transplant patients, 134A
- Long-term follow-up of amiodarone in the young: continued efficacy, unimpaired growth, moderate side effects, 171A
- Mechanical function and palmitate oxidation in the neonatal piglet heart during normothermic ischemia and reperfusion,
- Modulation of the fetal left ventricular function curve by thoracic tissue, 136A
- Noncardiac defects associated with conotruncal abnormalities-further implications of neural crest influence, 118A
- Noninvasive discrimination of right atrial ectopic from sinus tachycardia in dilated "cardiomyopathic" hearts, 137A
- Poor prognosis for fetuses with prenatally diagnosed tricuspid valve abnormalities, 205A
- Postnatal developmental changes in myocardial mitochondrial calcium transport, 137A
- Remodeling of the aorta following successful balloon coarctation angioplasty, 240A
- Respiratory influence on RV and LV diastolic filling in normal children, 205A
- Time course of pulmonary arterial pressure change in the early postnatal periodnoninvasive color Doppler and continuous wave Doppler echocardiographic study. 225A
- Transcatheter umbrella closure of atrial defects, 120A
- Use of balloon-expandable stents to treat experimental peripheral pulmonary artery and superior vena caval stenosis: preliminary experience, 119A
- Validation of Doppler echocardiographic calculation of descending aortic umbilical flow in fetal lambs, 137A
- Ventricular septal defect with aortic regurgitation: a 35 year experience, 121A Ventricular volume and function in infant orthotopic heart transplantation, 239A

Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A

## Pericardial abnormalities

Diagnosis of pericardial abnormalities by two-dimensional echo: a pathology-echo correlation in 85 patients, 235A

#### Pericardial effusion

- Effect of pericardial effusion on energy requirements for defibrillation using extrapericardial patch electrodes, 112A
- Effectiveness of pericardioscopy for etiological diagnosis in 18 patients with suspected malignant pericardial effusion, 235A
- Left ventricular pseudo hypertrophy in pericardial effusion: a sign of cardiac tamponade, 235A

#### Pericardial sac

Geometric view of cardiac "efficiency," 86A Pericardioscopy

Effectiveness of pericardioscopy for etiological diagnosis in 18 patients with suspected malignant pericardial effusion, 235A

#### Pericarditis

Pericarditis in the face of thrombolytic intervention denotes severe myocardial damage, 236A

#### Pericardium

- Influence of the pericardium on dynamic right and left ventricular filling, 207A
- Regional deformation of the pericardium during the cardiac cycle, 219A

#### Peripheral vascular disease

Treatment of peripheral vascular disease with the transluminal extraction catheter: results of a multicenter study, 227A

Developmental changes in lidocaine action occur at neutral but not acidic pH, 250A

#### Phenoxybenzamine

Reduced myocardial blood flow with persistent vasodilator reserve: role of adrenergic activation, 187A

#### Phentolamine

Cocaine-induced contraction of vascular smooth muscle in inhibited by calcium channel blockade, 78A

## Phenylephrine

- Enhanced cardiac adrenergic response in cardiomyopathic hamster at a pre-congestive failure stage, 87A
- Increased contractility induced by alpha adrenergic stimulation in septic rat hearts,
- Role of  $\alpha$ -adrenergic receptors in syndrome X, 150A

## Pheochromocytoma

Left ventricular diastolic function in pheochromocytoma: relation to plasma catecholamines, 82A

#### **Phosphates**

- Simultaneous cardiac mechanics and myocardial phosphorus-31 NMR energetics during global ischemia & reperfusion in the closed-chest conscious dog, 200A
- Time-averaged phosphorus-31 NMR spectroscopy of the metabolic response to hemodynamically equivalent pacing-induced and flow-limited ischemia in the conscious dog, 219A

## Phosphatidylinositol

Hypoxia and glucose deprivation independently induce uncoupling of α<sub>1</sub>-adrenergic signal transduction in cultured myocardial cells, 252A

# Phosphoinositide

Enhanced phosphoinositide metabolism during reperfusion of ischemic rat heart: a novel mechanism of reperfusion injury, 252A Phospholipid

Sarcolemmal phospholipid turnover: a critical mediator of myocardial injury, 252A

Enhanced recognition of plaque composition in vivo using laser excited fluorescence spectroscopy, 54A

# Plasminogen activator, tissue

Antiplatelet antibody [7E3 F(ab)] prevents rethrombosis after tissue-type plasminogen activator induced coronary artery thrombolysis in a canine model,

Aspirin but not standard heparin prevents

- thrombus deposition in rabbits treated with tissue plasminogen activator, 77A
- Bleeding complications after double-chain tPA: influence of dose and duration of infusion, 77 A
- Comparison of the effect of upright posture and exercise on platelet aggregability and fibrinolytic activity, 93A
- Determinants of improved global left ventricular function after tPA and deferred PTCA for acute MI, 92A
- Dose response relationship of rt-PA infusion to induction of systemic fibrin (ogen) olysis in the NHLBI thrombolysis in myocardial infarction (TIMI-II) trial, 198A
- Echocardiographic evaluation of segmental wall motion early and late after thrombolytic therapy in acute myocardial infarction, 156A
- Economic advantage of a conservative strategy for AMI management: rt-PA without obligatory PTCA, 152A
- Effect of the length of tissue plasminogen activator administration on lysis of fresh and old thrombi, 78A
- Effect of TPA on myocardial cells, the no-reflow phenomenon and intramyocardial hemorrhage, 124A
- Is delivery of rt-PA by helicopter transport teams safe and time-effective?, 192A
- Lack of association between early administration of thrombolytic therapy and the development of non-Q wave myocardial infarction, 6A
- Myocardial infarction with minimal coronary atherosclerosis: a syndrome of young women with guarded long term prognosis, 27A
- Myocardial rupture complicating tissue plasminogen activator therapy of acute myocardial infarction, 94A
- No difference in long term ventricular function after streptokinase and tissue plasminogen activator therapy in acute myocardial infarction, 96A
- Pericarditis in the face of thrombolytic intervention denotes severe myocardial damage, 236A
- Prehospital thrombolytic therapy—mini project report on Phase I: feasibility, characteristics of patients, 152A
- Risk factors for hemorrhagic and ischemic stroke in myocardial infarct patients treated with tissue plasminogen activator, 153A
- rtPA versus rtPA plus PTCA in acute myocardial infarction: quantitative results of early and late coronary arteriography, 54A
- Selective inhibition of  $\alpha_2$ -antiplasmin augments the potency and specificity of plasminogen activators, 2A
- TIMI II a new study of PTCA timing after rt-PA thrombolysis for acute myocardial infarction (AMI), 194A
- Tissue plasminogen activator for unstable angina pectoris: a multicenter, randomized, double-blind, placebo-controlled trial, 191A
- Western Washington tissue plasminogen activator emergency room study, 94A

#### Plasminogen activator inhibitor

Platelet plasminogen activator inhibitor: purification and characterization of interaction with plasminogen activators and activated Protein C, 1A

#### Platelet(s)

Angiographic demonstration of hyperconstriction induced by serotonin and aggregating platelets in porcine coronary arteries with regenerated endothelium, 31A

# Platelet-activating factor

Cardiovascular effects of platelet-activating factor in conscious dogs, 144A

#### Platelet aggregation

- Comparison of the effect of upright posture and exercise on platelet aggregability and fibrinolytic activity, 93A
- Progression of coronary atherosclerosis and enhanced thrombin-induced platelet aggregability, 42A
- Treatment of hypertension alters the relationship between platelet calcium and sensitivity to aggregatory agents, 104A

# Platelet deposition

Platelet deposition in areas of stenosis is stimulated by high plasma cholesterol levels, 145A

#### Platelet function

Absorption and effect on platelet function from single dose concentrated fish oil compared with tunafish. 12A

## Pleural effusion

Pleural effusion as a cause of right ventricular diastolic collapse and cardiac tamponade, 236A

## Posture

Effects of upright posture on atrioventricular accessory pathway conduction, 205A

#### Potassium

- Effects of glyburide on ischemia-induced changes in extracellular potassium and local myocardial activation: a novel antiarrhythmic mechanism, 142A
- Nonhomogenous redistribution of regional myocardial blood flow and potassium during reperfusion of ischemic myocardium, 127A

#### Potassium chloride

Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A

#### PR interval

Site of age-related PR interval prolongation in normal subjects, 57A

#### Prazos

- Cocaine-induced contraction of vascular smooth muscle is inhibited by calcium channel blockade, 78A
- Increased contractility induced by alpha adrenergic stimulation in septic rat hearts, 144A
- Role of  $\alpha$ -adrenergic receptors in syndrome X, 150A

# Prednisolone, Prednisone

- Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A
- Prednisone withdrawal in "high risk cardiac transplant recipients," 212A
- Prophylactic anti-rejection therapy early after

- cardiac transplantation: RATG versus OPKT3, 62A
- Treatment of cardiac allograft rejection with pulsed steroids: a three year experience, 210A

#### Preexcitation

100% specificity in localizing ventricular preexcitation site in WPW syndrome with ECG 10A

#### Pregnancy

Disopyramide induces uterine contractions in pregnancy, 141A

#### Preload

See Loading conditions

#### Pressure gradients

Can the modified Bernoulli equation accurately estimate instantaneous transmitral pressure gradients in patients with cardiac pathology?, 234A

#### Pressure half-time

- Systemic errors in the Doppler pressure half-time formula for mitral orifice area, 234A
- Ventricular and atrial compliance changes affect pressure half-time: experimental evidence, 234A

#### Preventive cardiology

Housestaff practice of preventive cardiology: who's not doing what?, 37A

#### Procainamide

- Comparison of antiarrhythmic efficacy and safety of class 1A, 1B, and 1C agents in symptomatic and potentially malignant ventricular arrhythmia, 163A
- Comparison of flecainide vs procainamide in depressing retrograde conduction in atrioventricular nodal reentry tachycardia, 165A
- Effect of antiarrhythmic drugs on frequency-domain parameters of signal-averaged ECG, 191A
- Epicardial mapping of rate-dependent ventricular conduction slowing by procainamide, 251A
- Rate-dependent slowing of intraventricular conduction by procainamide: direct measurement in the human heart, 250A
- Reliability of procainamide in predicting the shortest preexcited R-R interval during atrial fibrillation is dose dependent, 204A
- Use-dependent prolongation of ventricular tachycardia cycle length by type 1A and 1C drugs, 21A

## Propafenone

- Combined therapy with type 1C and 1B agents: is it effective for ventricular tachycardia?, 141A
- Effect of antiarrhythmic drugs on frequency-domain parameters of signal-averaged ECG, 191A
- Intravenous propagenone for conversion of atrial flutter or fibrillation of recent onset, 140A
- Oral propafenone for prevention of recurrent atrial fibrillation: predictive value of the response to transesophageal atrial stimulation, 233A
- Short term variability of ventricular arrhythmia and rapid assessment of drug efficacy, 140A

#### Propranolol

Beta-blockers in syndrome X, 150A Comparison of pharmacological and nonpharmacological treatment of hypertension. A randomized placebo controlled study, 104A

Electrophysiologic effects of a chemical defibrillatory agent: dibenzepin, 250A

Enhanced cardiac adrenergic response in cardiomyopathic hamster at a pre-congestive failure stage, 87A

Exercise training versus exercise training with diltiazem or propranolol: effects on lipids in men with mild hypertension, 241A

Exercise training versus exercise training with diltiazem or propranolol: effects on maximal oxygen uptake and exercise duration in men with mild hypertension, 241A

Exercise training versus exercise training with diltiazem or propranolol: effects on resting blood pressure in men with mild hypertension, 106A

Increased contractility induced by alpha adrenergic stimulation in septic rat hearts, 144A

Modulation of the fetal left ventricular function curve by the throacic tissue, 136A

'Torsade de pointes' with quinidine and propranolol in conscious dogs with A-V block, 249A

#### **Protein**

Suppression of cardiac protein degredation contributes to progressive hypertrophy due to aortic regurgitation. 71A

"Up regulation" of GTP binding proteins following cardiac parasympathectomy quantitation by immunoblot method, 143A

## Protein C

Platelet plasminogen activator inhibitor: purification and characterization of interaction with plasminogen activators and activated protein C, 1A

#### Pro-urokinase

Acute thrombotic reocclusion after percutaneous transluminal coronary angioplasty—should thrombolysis be attempted?, 58A

Coronary thrombolysis with urokinase preactivated intravenous pro-urokinase, 193A

Early reperfusion after treatment with intravenous pro-urokinase when compared to intravenous streptokinase, 152A

Heparin potentiates the thrombolytic efficacy of natural pro-urokinase, 198A

#### Pseudoaneurysm

Diagnosis of left ventricular pseudoaneurysm by colour Doppler flow mapping, 24A

#### Pulmonary artery pressure

Estimation of pulmonary pressure in ventricular septal defect: Doppler and color flow application, 52A

Non-invasive computer reconstruction of the pulmonary artery pressure waveform using Doppler echocardiography, 225A

Time course of pulmonary arterial pressure change in the early postnatal period noninvasive color Doppler and continuous wave Doppler echocardiographic study, 225A

#### Pulmonary capillary wedge pressure

Use of pulmonary capillary wedge pressure to assess the severity of mitral stenosis: is a true left atrial pressure needed in these patients?, 146A

## Pulmonary disease

Reduced exercise capacity of chronic obstructive pulmonary disease patients exercising with noseclip/mouthpiece: decreased right heart preload?, 183A

#### Pulmonary venous flow velocities

Effect of age on pulmonary venous flow velocities in normal subjects, 50A

#### Pulsation

Improved hemodynamic and left ventricular unloading during acute ischemia using the hemopump left ventricular assist device compared to intra aortic balloon counter pulsation, 160A

#### Q waves

Q waves in hypertrophic cardiomyopathy: presence and localization according to the site and extent of right and left ventricular hypertrophy, 10A

#### **QRS** interval

His-Purkinje activation during ventricular tachycardia: a determinant of QRS duration. 21A

# QT interval

Abnormal QT/QS<sub>2</sub> ratio at rest and exercise in Romano-Ward long QT patients, normalized by beta-blocker therapy, 11C

Effects of position and exercise on the QT interval in children, 171A

Etiology of polymorphic ventricular tachycardia in the absence of prolonged QT, 21A

Improved electrocardiographic identification of patients with the long QT syndrome (LQTS), 11A

Long QT syndrome international prospective registry, 20A

## Quantitative regional curvature analysis

Quantitative regional curvature analysis: determination of abnormal systolic and diastolic function by assessing shape throughout the cardiac cycle, 100A

## Quinidine

Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil and class I agents, 249A

Dynamic response of conduction velocity to quinidine during pulse train stimulation in canine Purkinie fibers, 163A

Effect of antiarrhythmic drugs on frequency-domain parameters of signal-averaged ECG, 191A

Effects of combined low doses of quinidine and metoprolol on inducible ventricular arrhythmias in a chronic canine infarct model, 248A

Is the proarrhythmic effect of quinidine a chaotic phenomenon?, 186A

Quinidine myocardial pharmacokinetics and pharmacodynamics: influence on hypoxia, 138A

'Torsade de pointes' with quinidine and

propranolol in conscious dogs with A-V block, 249A

#### Radionuclide studies

See Angiography, radionuclide; Ventriculography, radionuclide

#### Recanalization

Combined laser/thermal recanalization of peripheral artery occlusions, 13A

#### Reentry

Incidence and substrate of sustained bundle branch reentry as a mechanism of ventricular tachycardia, 174A

#### Refractoriness

Factors that influence the reproducibility of ventricular refractoriness, 45A

#### Regurgitant fractions

Validation of a method to estimate regurgitant fractions using the power mode in a dog model, 23A

#### Relaxation

See also Ventricular relaxation
Effect of oral administration of
antihypertensive agents on endothelium
dependent and endothelium independent
vascular relaxation, 83A

Genetically-induced atherosclerosis attenuates endothelially mediated relaxation, 32A

#### Relaxation time

T2 relaxation time as a predictor of oardiac transplant rejection in humans, 201A

#### Relaxing factor

Evaluation of endothelial dependent relaxation in human saphenous veins, 165A

## Renal circulation

Cyclosporin therapy impairs endothelium-dependent relaxation in the renal circulation, 83A

## Renal transplantation

Role of intravenous dipyridamole thallium imaging in preoperative cardiac risk assessment before renal transplantation, 161A

#### Renin

Atrial natriuretic factor inhibition of renin during renal hypertension: role for the macula densa, 8A

Differences in neurohumoral activation in patients with left ventricular dysfunction with and without heart failure, 246A

# Respiration

Respiratory influence on RV and LV diastolic filling in normal children, 205A

#### Restenosis

Consequences of early restenosis after coronary angioplasty, 229A

Detection of restenosis after elective coronary angioplasty using the exercise treadmill test. 236A

Dual balloon aortic valvuloplasty, despite augmenting acute hemodynamic improvement, fails to prevent post-valvuloplasty restenosis, 148A

Effect of larger balloon size on recurrence after repeat coronary angioplasty due to restenosis, 208A

Factors associated with restenosis following successful peripheral atherectomy, 13A

Histologic evaluation of "vessel-biopsies" obtained with the Simpson atherectomy catheter, 149A

Low dose of antitumor agents prevents smooth

- muscle cell proliferation after endothelial injury, 252A
- Pathologic findings after in vivo placement of percutaneous balloon expandable tantalum stents, 224A
- Restenosis within coronary stents: possible effect of previous angioplasty, 107A
- Second dilatation for restenosis following successful balloon aortic valvuloplasty: results, pathology and mechanism, 17A
- Superiority of tomographic thallium imaging for the detection of restenosis after percutaneous transluminal coronary angioplasty, 161A
- Vascular repair and remodeling using radiofrequency balloon angioplasty, 228A

#### Resuscitation

Cardiac resuscitation by extracorporeal pump oxygenator (ECPO) after failure of precordial compression, 220A

#### Revascularization

Effect of myocardial revascularization on inducible ventricular arrhythmias, 174A Implantation of the internal mammary artery as a means of myocardial revascularization in a canine model of myocardial ischemia: a reassessment, 187A

#### Ribonucleic acid

Ventricular levels of the atrial natriuretic factor and of its messenger ribonucleic acid at the time of heart transplantation, 9A

#### Rihose

Ribose infusion post-ischemia alters thallium-201 myocardial clearance in patients with coronary disease, 29A

#### Risk factors

- Cardiovascular risk reduction through worksite health promotion, 134A
- Risk assessment after myocardial infarction ruled out, 184A
- Risk factors and mortality in the multiple risk factor intervention trial after 10.5 years of follow-up, 11A

#### Rotablation

Percutaneous transluminal coronary rotablation during heart catheterization, 228A

## R-R interval

Reliability of procainamide in predicting the shortest preexcited R-R interval during atrial fibrillation is dose dependent, 204A

#### Rubidium-82

Non-invasive identification of viable versus infarcted myocardium by automated three-dimensional cardiac positron emission tomography with generator produced rubidium-82, 29A

Does acute pharmacologic stimulation of stunned myocardium have chronic deleterious effects?, 219A

## Saxitoxin

Preliminary biochemical characterization of the canine cardiac sodium channel, 208A

# Scintigraphy

See Thallium-201

# Seismocardiography

Exercise radionuclide angiography yields prognostic information equivalent to cardiac catheterization, 126A

Seismocardiography for detection of coronary

artery occlusion during coronary angioplasty: a preliminary report, 43A

#### Selenium

Model for congestive heart failure: selenium and vitamin E deficient mini pigs, 208A

#### Sensors

Implantable and extractable sensor for intra and postoperative monitoring of blood flow in man, 214A

# Sepsis

See also Infection

Increased contractility induced by alpha adrenergic stimulation in septic rat hearts,

#### Serotonin

Angiographic demonstration of hyperconstriction induced by serotonin and aggregating platelets in porcine coronary arteries with regenerated endothelium, 31A

Endothelium protects against contractions induced by histamine and serotonin in arterial, but not in venous coronary bypass grafts, 166A

#### Shock, cardiogenic

Emergency percutaneous cardiopulmonary (bypass) support in cardiogenic shock, 160A

#### Sick sinus syndrome

New quantitative method of sinoatrial nodal cells in sick sinus syndrome, 184A

Augmentation of ejection fraction during ambulatory monitoring in thrombolysis patients with concomitant silent ventricular dysfunction: mechanistic implications, 96A

Exercise-induced silent ischemia: effect of type A behavior on frequency and prognosis,

Exercise test results predict silent ischemia on ambulatory monitoring, 3A

Incidence and prognostic significance of early postoperative silent ischemia in peripheral vascular surgery patients, 149A

Left ventricular function at rest and the prevalence of ambulatory silent ischemia in coronary artery disease, 203A

Silent coronary artery disease in elderly men: low exercise tolerance is strongly associated with multivessel disease, 37A

Silent ischemia on ambulatory ECG monitoring provides additional prognostic information in patients with stable angina and a positive exercise treadmill test, 202A

Silent ischemia during daily life is an independent predictor of survival in stable angina, 3A

Duration of sinus node depolarization can indicate the degree of sinus node dysfunction, 232A

# Skeletal muscle

Capillary density, fiber type and enzyme composition of skeletal muscle in congestive heart failure, 38D

Decreased aerobic oxidative capacity in skeletal muscle in chronic heart failure,

Skeletal muscle metabolic abnormalities in

heart failure are in part due to intrinsic skeletal muscle changes, 39A

#### Sleep apnea syndrome

Holter monitoring in the diagnosis of sleep apnea syndrome, 189A

#### **Smoking**

Chronic impairment of parasympathetic cardiac control in heavy smokers, 36A

Recent exposure to cigarette smoke increases myocardial size infarct, 124A

Smoking cessation post myocardial infarction: effects of a nurse-directed intervention.

Survival and quality of life in cigarette smokers versus quitters randomized to medicine or CABG in the coronary artery surgery study (CASS): 10 year follow-up, 36A

#### Smooth muscle

Cocaine-induced contraction of vascular smooth muscle is inhibited by calcium channel blockade, 78A

Excimer laser irradiation induces endothelium-independent relaxation of vascular smooth muscle, 141A

Mechanism responsible for laser-induced photorelaxation of vascular smooth muscle is limited to ultraviolet and visible wavelengths, 142A

#### Sodium channel

Preliminary biochemical characterization of the canine cardiac sodium channel, 208A

#### Sodium currents

Evidence for two types of sodium currents inisolated neonatal AV nodal heart cells.

# Sodium nitroprusside

See Nitroprusside

Effect of antiarrhythmic drugs on frequency-domain parameters of signal-averaged ECG, 191A

Safety, efficacy and predictive value of drug termination of ventricular tachycardia,

#### Sovacal

Hibernation induction trigger extended effective organ preservation time in a new autoperfusion multiorgan preparation, 63A

# Spasm

Coronary spasm induced by stent implantation, 194A

Human percutaneous laser-assisted coronary angioplasty: efforts to reduce spasm and thrombosis, 61A

In vivo near infrared monitoring of myocardial oxygenation during ischemia and reperfusion, 251A

In vivo 31P spectroscopy from turtle heart during anoxia and recovery, 199A

Myocardial protection with verapamil during ischemia and reperfusion: assessment by magnetic resonance spectroscopy, 200A

Time-averaged phosphorus-31 NMR spectroscopy of the metabolic response to hemodynamically equivilant pacing-induced and flow-limited ischemia in the conscious dog, 219A

<sup>31</sup>P-magnetic resonance spectroscopy and cine <sup>1</sup>H magnetic resonance imaging of dilated cardiomyopathy in humans, 199A

Transmurally localized 31P MRS: metabolic heterogeneity during myocardial ischemia, 199A

# Spinal stimulation

Epidural spinal stimulation in patients suffering from intractable angina, 46A

#### SO 30217

- Kinetics of the new Tc-99m labeled blood flow marker (SQ30217) in canine myocardium,
- Planar and tomographic myocardial imaging with SQ 30217, a new technetium labeled agent, 98A

#### ST segment

- Enhanced β-adrenergic activity in non-infarcted myocardium may cause exercise-induced St-segment elevation in old myocardial infarction, 124A
- Importance of assessing ST elevation by Holter monitoring in unstable angina, 203A
- In-hospital angina with transient ECG changes predict poor one-year survival only in patients with ST depression, 93A
- Initial validation of a new patient-borne miniature device for continuous monitoring of left ventricular function and ST-segment, 96A
- Post-exercise ST segment depression in relation to heart rate: improved identification of coronary artery disease by the rate-recovery loop, 236A
- Significance of exercise-induced ST segment elevation in patients with Q wave anterior myocardial infarction: evaluation by positron emission tomography, 203A
- ST analysis: intragroup versus intrapatient variability of Holter results, 189A

#### Stenosis

- Antithrombotic effect of aspirin is independent of stenosis severity, 77A
- Aortic stenosis in the elderly: aortic balloon valvuloplasty vs. aortic valve replacement, 38A
- Balloon mitral valvuloplasty: a multicentre study, 70A
- Comparison of the Gorlin, Cannon, Angel and Hakki equations for the determination of pathologic stenosis in porcine xenografts,
- Coronary anatomy preceding non-Q wave myocardial infarction, 6A
- Details of coronary stenosis morphology influence its hemodynamic severity and distal flow reserve, 43A
- Detection of coronary stenoses by high speed NMR imaging: the utility of dysprosium-DTPA, 48A
- Different immediate and long-term outcome after percutaneous balloon valvuloplasty for severe aortic stenosis, contingent upon the type of valve, 54A
- Doppler-echo evaluation of aortic stenosis severity pre-and post-balloon aortic valvuloplasty, 114A
- Doppler-echo evaluation of mitral stenosis pre-and post-balloon valvuloplasty, 114A
- Effect of subcritical stenosis on coronary and myocardial flow reserve in territory supplied by other non-stenotic arteries, 7A

- Evidence against a "myocardial factor" in rheumatic mitral stenosis, 147A
- Extent of jeopardized myocardium: importance of location, severity and extent of coronary stenosis, 44A
- High frequency (ultrasonic) mechanical debridement in the treatment of calcific aortic stenosis: an angiographic study, 214A
- Increased flow velocity in the human coronary stenosis: a simple assessment of stenosis severity, 131A
- Incremental critical coronary stenosis contracts rather than expands myocardial vascular volume, 218A
- Intraluminal two-dimensional ultrasound angioscopic quantitation of arterial stenosis: comparison with external high-frequency ultrasound imaging and anatomy, 5A
- Intravascular ultrasound imaging catheter accurately measures area of aortic valves in vitro, 49A
- Is balloon valvuloplasty beneficial in patients with calculated critical aortic stenosis but low ejection fraction and pressure gradient, 156A
- Left ventricular relaxation in mitral stenosis before and after valvuloplasty, 55A
- Mechanical resistance in aortic stenosis: an index of functional change after valvuloplasty, 147A
- Myocardial infarction with minimal coronary atherosclerosis: a syndrome of young women with guarded long term prognosis, 27A
- Natural history of adults with asymptomatic, severe aortic stenosis, 147A
- One-year clinical and Doppler echocardiographic follow-up of patients having double-balloon catheter balloon valvuloplasty for mitral stenosis, 115A
- Platelet deposition in areas of stenosisis stimulated by high plasma cholesterol levels, 145A
- Progression of aortic stenosis as assessed by echocardiography, 233A
- Propagation of turbulence in aortic stenosis, 101A
- Rapid reduction of plasma atrial natriuretic peptide after balloon mitral valvuloplasty in patients with mitral stenosis, 69A
- Regression of infundibular pulmonary stenosis after successful balloon pulmonary valvuloplasty in adults, 56A
- Relative coronary flow reserve reflects stenosis severity more accurately than absolute flow reserve during changing aortic pressure and cardiac workload, 162A
- Reverse redistribution following myocardial infarction is related to severity of coronary stenosis, 99A
- Superiority of Tc-99m methoxyisobutyl isonitrile compared to thallium-201 for the tomographic assessment of coronary artery stenosis, 98A
- Surgical fate of mitral regurgitation associated with severe aortic stenosis: an interoperative echo study, 72A
- Use of balloon-expandable stents to treat experimental peripheral pulmonary artery

- and superior vena caval stenosis: preliminary experience, 119A
- Use of pulmonary capillary wedge pressure to assess the severity of mitral stenosis: is a true left atrial pressure needed in these patients?, 146A
- Valve resistance in aortic stenosis: an alternative method for assessing the hemodynamic significance of flow obstruction, 234A

#### Stents

- Additional improvement in vessel lumen in the first 24 hours after stent implantation due to radial dilating force, 224A
- Balloon expandable intravascular stents (BEIS) in human coronary arteries: a follow-up report, 106A
- Chronic endovascular responses after stent implantation in vein grafts, 106A
- Coronary spasm induced by stent implantation, 194A
- Evaluation of aortic implantation and redilation of balloon expandable intravascular stents in juvenile minipigs, 223A
- Implantation of 100 coronary artery stents: learning curve incidence for the acute early complications, 107A
- Pathologic findings after in vivo placement of percutaneous balloon expandable tantalum stents, 224A
- Restenosis within coronary stents: possible effect of previous angioplasty, 107A
- Self-expanding parallel wire metallic stent,
- Stent implantation for the treatment of coronary artery bypass graft stenosis, 107A
- Use of balloon-expandable stents to treat experimental peripheral pulmonary artery and superior vena cavalstenosis: preliminary experience, 119a

## Steroids

- Cytomegalovirus infection in cardiac transplant recipients predicts the incidence of allograft atherosclerosis, 213A
- Influence of antihypertensive therapy on plasma hormones in cardiac transplant recipients: measurements at rest and during exercise, 81A
- Linear growth in pediatric cardiac transplant recipients, 134A

#### Streptokinase

- Defibrinogenation reduces infarct size in a canine model of acute myocardial infarction, 125A
- Demonstration of viable myocardium after an acute infarction submitted to thrombolysis: comparison between positron emission tomography and dobutamine echocardiography, 192A
- Early reperfusion after treatment with intravenous pro-urokinase when compared to intravenous streptokinase, 152A
- Effect of thrombolysis on late potentials incidence after acute myocardial infarction, 178A
- No difference in long term left ventricular function after streptokinase and tissue plasminogen activator therapy in acute myocardial infarction, 96A

- Streptokinase inhibits platelet thrombus formation in stenosed dog coronary arteries: possible mechanisms, 78A
- Sustained left ventricular function benefit one year after thrombolytic therapy, 26A
- Thrombolysis-induced limitation of infarct size in relation to time from pain onset and infarct localization: results from I.S.A.M study, 95A

#### Stress, mental

Echocardiographic assessment of mental stress induced wall motion abnormalities: comparison with exercise, 158A

#### Stress, shear

Coronary atherosclerosis impairs control of shear stress, 42A

#### Stroke

Risk factors for hemorrhagic and ischemic stroke in myocardial infarct patients treated with tissue plasminogen activator, 153A

#### Sudden death

- Evidence for an abnormal vasodilator response in hypertrophic cardiomyopathy, 117A
- Factors predicting survival from prehospital cardiac arrest, 35A
- Survival of patients with hypertrophic cardiomyopathy successfully resuscitated from sudden cardiac arrest, 117A
- Ventricular tachycardia is not the predominant cause of monitored sudden death in heart failure, 179A

#### Sufentanil

Cocaine induced deleterious effects on the canine coronary circulation, 79A

# Sulfhydryl groups

Oxidation of sulfhydryl groups of serum albumin in coronary artery diseases, 44A

## Sulfinpyrazone

S.T.A.I. (study of ticlopidine in unstable angina), 238A

# 8-Sulfo-phenyltheophylline

Termination of epinephrine-induced ventricular tachycardia by adenosine in halothane-anesthetized dogs, 249A

## SUN-1165

Electrophysiologic and hemodynamic effects of SUN-1165: a new antiarrhythmic drug, 163A

## Superoxide dismutase

Direct administration of recombinant superoxide dismutase significantly preserves myocardial function and mitochondrial structures after 30 minutes normothermic global ischemia, 63A

Preservation of myocardial function and topography by late reperfusion and long-active superoxide dismutase, 109A

Superoxide dismutase (SOD) (SOD) prevents reperfusion-induced deterioration in coronary vasodilator reserve (CVR) and regional myocardial function, 110A

# Surgery, ablation

- His bundle cryosurgical ablation using a closed heart epicardial approach, 175A
- Junctional tachycardia—anatomic substrate and its significance in ablative procedures, 175A

## Surgery, cardiac

See also specific procedure

Late follow-up of 781 patients undergoing

- percutaneous transluminal coronary angioplasty (PTCA) or open heart surgery for an isolated obstruction in the left ascending (LAD) coronary artery, 166A
- Postoperative monitoring of regional left ventricular function in man, 80A
- Predictors of deep sternal wound infections after cardiac surgery, 122A

# Surgery, coronary artery bypass

- See also Cardiopulmonary bypass Benefit of the "bailout" catheter for emergency bypass surgery after failed PTCA, 155A
- Central neurological complications after coronary artery bypass: influence of multiple aortic cross-clamping, 122A
- Comparison of socio-economics and outcome after multivessel coronary angioplasty or bypass surgery, 230A
- Coronary blood flow and hemodynamics during exercise after the coronary artery bypass grafting with the internal mammary artery for Kawasaki disease, 74A
- Effects of coronary revascularization on regional wall motion: an intraoperative echo study, 211A
- Mechanism of myocardial infarction in patients with prior coronary bypass surgery, 93A
- Myocardial infarction complicating elective coronary bypass surgery, 166A
- Portable bypass does not improve survival in cardiac arrest patients, 121A
- Risk of death after nonfatal myocardial infarction in the VA cooperative study of coronary artery bypass surgery, 166A
- Role of radionuclide angiography in selecting patients for coronary bypass surgery, 213A
- Use of the exercise test to predict prognosis after coronary artery bypass surgery, 183A

#### Surgery, pediatric

- Determinants and outcome of early and late arrhythmia after Fontan operation, 170A Experience with the Fontan procedure, 75A Impact of coexisting heart disease on outcome of surgery for Wolff-Parkinson-White
- syndrome in children, 138A Impact of medical and surgical therapy on the cardiovascular prognosis of the Marfan syndrome, 119A
- Neonatal repair of Fallot's tetralogy with and without pulmonary atresia, 74A
- Patterns and determinants of exercise performance in Fontan patients, 135A
- Right ventricular size and pulmonary flow in patients after first stage surgery for pulmonary atresia: combined assessment by cine magnetic resonance imaging and color Doppler flow mapping, 240A
- Right ventricular growth and function following Fontan procedure for tricuspid atresia,
- Surgical management of aortic arch obstruction and transposition of the great arteries, 120A

## Surgery, valve

Altered left ventricular diastolic filling due to acute left ventricular volume overload following tricuspid valvulectomy. A

- pulsed Doppler echocardiographic study, 72A
- Can color Doppler/two dimensional echocardiography identify the need for tricuspid valve repair?, 24A
- Doppler-echocardiographic evaluation of the results of surgical ultrasonic decalcification of the aortic valve, 113A
- Echo evaluation of immediate and late failed mitral valve repair, 114A
- Echo-Doppler vs cardiac catheterization in the decision to operate on mitral valves, 72A
- Utility of transesophageal echocardiography in patients undergoing cardiac valve surgery, 123A

## Surgery, vascular

- Comparison of exercise testing, dipyridamole thallium imaging and gated blood pool scanning for the prediction of cardiac complications following vascular surgery, 149A
- Incidence and prognostic significance of early postoperative silent ischemia in peripheral vascular surgery patients, 149A

#### Sympathetic drive

Evidence for an early increase in cardiac sympathetic stimulation in patients with diastolic dysfunction, 246A

## Sympathetic nervous system

Alterations in lymphocyte subsets and catecholamines in congestive heart failure, 180A

## Syncope

Combined ambulatory EEG and ECG monitoring for evaluation of syncope, 33A

#### Syndrome X

- Beta-blockers in syndrome X, 150A Effects of nitrates on coronary hemodynamics and anginal threshold in syndrome X, 155A, 201A
- Exercise capacity after acute aminophylline administration in patients with syndrome X, 202A
- Long-term follow-up and variability of markers of myocardial ischemia in syndrome X, 150A
- Role of  $\alpha$ -adrenergic receptors in syndrome X, 150A
- Syndrome X: a primary metabolic disease?, 202A

#### Systolic function

- Acute and chronic response to oral enoximone in severe congestive heart failure: sustained hemodynamic improvement and preferential effect on right ventricular systolic performance, 101A
- Relationship between left ventricular mass regression and improved left ventricular filling in severe hypertension, 244A

## Systolic thickening

Percent wall thickening is preload dependent at low but not at high levels of afterload, 219A

# T lymphocytes

See Lymphocytes

#### T wave

Variability of negative T wave in left ventricular hypertrophy, the possible result of contraction-excitation feedback, 35A

#### **Tachvarrhythmias**

See also Ventricular tachyarrhythmias Autonomic influence on ventricular subsidiary pacemakers: a study of patients post AV nodal ablation, 232A

#### Tachycardia

- See also Ventricular tachycardia
  Catheter modification of AV nodal conduction
- in drug resistant AV nodal conduction in drug resistant AV nodal reentrant tachycardia (AVNRT), 176A
- Catheter modification of the atrioventricular node: a potential cure for atrioventricular nodal reentrant tachycardia, 168A
- Comparison of flecainide vs. procainamide in depressing retrograde conduction in atrioventricular nodal reentry tachycardia, 165A
- Effect of epicardial accessory pathway ablation or endocardial dissection for AV nodal reentrant tachycardia, 232A
- Junctional tachycardia—anatomic substrate and its significance in ablative procedures, 175A
- New criterion for diagnosis of sustained bundle branch reentry tachycardia, 21A
- Retrograde conduction properties determine rate-dependent efficacy of diltiazem for AV reentrant tachycardia, 251A
- Retrograde pathway in atrioventricular nodal tachycardia: nodal tissue or extranodal accessory pathway?, 175A
- Sustained preexcited tachycardia: AV nodal rather than true antidromic reentry as the main mechanism. 204A

## **Tachyphylaxis**

- Absence of tachyphylaxis following chronic therapy with xamoterol in heart failure, 2474
- Tachyphylaxis associated with dopexamine administration in severe heart failure, 247A

## Tamponade

See Cardiac tamponade

#### **Technetium**

- Assessment of myocardial viability with technetium-99m 2 methoxy isobutyl isonitrile (MIBI) and gated tomography in patients with coronary artery disease, 31A Assessment of "no reflow" phenomenon
- Assessment of "no reflow" phenomenon during reperfusion with 99mTc-MIBI and 14C-deoxyglucose, 30A
- Clinical comparison between thallium-201 and Tc-99m methoxy isobutyl isonitrile (MIBI) myocardial perfusion imaging for detection of coronary artery disease, 30A
- Quantitative analysis of stress TC-99m methoxy isobutyl isonitrile (MIBI) SPECT: preliminary development and validation of an optimized computerized method, 98A
- Serial changes in myocardial perfusion using tomographic technetium-99m methoxy isobutyl isonitrile (Tc-MIBI) following reperfusion therapy of myocardial infarction, 30A
- Superiority of Tc-99m methoxyisobutyl isonitrile compared to thallium-201 for the tomographic assessment of coronary artery stenosis, 98A
- Tomographic assessment of myocardial reperfusion during acute myocardial

- infarction using Tc-99m methoxy isobutyl isonitrile (MIBI), 153A
- Tomographic myocardial perfusion imaging with technetium-99m 2-methoxy isobutyl isonitrile (MIBI) and thallium-201: the sensitivity and reproducibility of semi-quantitative assessments of myocardial perfusion and regional systolic function, 30A

#### **Tetralogy of Fallot**

- Elevated right ventricular pressure increases collagen in ventricular scars in canines, 118A
- Neonatal repair of Fallot's tetralogy with and without pulmonary atresia, 74A
- Prevalence of congenital heart disease in offspring of parents with Fallot's tetralogy, 240A

#### Tetrodotoxi

Preliminary biochemical characterization of the canine cardiac sodium channel, 208A

#### Thallium-201

See also Dipyridamole

- Adenosine thallium-201 scintigraphy: feasibility, safety, and initial results in man, 161A
- Characterization of patients with abnormal stress redistribution TL-201 SPECT and normal coronary arteries, 99A
- Clinical comparison between thallium-201 and Tc-99m methoxy isobutyl isonitrile (MIBI) myocardial perfusion for detection of coronary artery disease. 30A
- Cost-benefit advantage of primary scintigraphic evaluation after uncomplicated acute inferior wall myocardial infarction, 162A
- Dipyridamole-Doppler echocardiography: comparison to thallium-201 imaging and quantitative coronary arteriography, 159A
- Early post-thrombolysis assessment of necrosis and viability with rest-redistribution thallium scintigraphy: correlation with positron emission tomography (PET), 28A
- Frequency of late defect reversibility in SPECT TL-201 stress redistribution studies, 28A
- Insensitivity of thallium-201 imaging after oral dipyridamole for detection of reversible myocardial ischemia, 182A
- Limitations of exercise thallium single photon tomography early after myocardial infarction, 125A
- Reverse redistribution following myocardial infarction is related to severity of coronary stenosis. 99A
- Ribose infusion post-ischemia alters thallium-201 myocardial clearance in patients with coronary disease, 29A
- Superiority of Tc-99m methoxyisobutyl isonitrile compared to thallium-201 for the tomographic assessment of coronary artery stenosis, 98A
- Superiority of tomographic thallium imaging for the detection of restenosis after percutaneous transluminal coronary angioplasty, 161A
- Tomographic myocardial perfusion imaging with technetium-99m 2-methoxy isobutyl isonitrile (MIBI) and thallium-201: the sensitivity and reproducibility of semi-quantitative assessments of

myocardial perfusion and regional systolic function, 30A

#### Thrombi

- Detection of intravascular thrombus by high frequency intraluminal ultrasound angioscopy: in vitro and in vivo studies,
- Detection of pulmonary artery thrombi by transesophageal echocardiography in patients with suspected pulmonary embolism, 224A
- Effects of aspirin on in vitro lysis with urokinase of combined platelet and fibrin thrombi, 91A
- Identification of acute experimental left ventricular thrombi using a real-time backscatter imaging system, 59A
- N-acetylcysteine potentiates IV nitroglycerin in inhibiting periodic platelet thrombus formation in stenosed dog coronary arteries, 145A
- Streptokinase inhibits platelet thrombus formation in stenosed dog coronary arteries: possible mechanisms, 78A

#### Thrombin

- Early thrombotic reocclusion after successful coronary thrombolysis is predictable from an increased thrombin release two hours after onset of therapy, 152A
- Progression of coronary atherosclerosis and enhanced thrombin-induced platelet aggregability, 42A
- Thrombin inhibition by hirudin decreases platelet thrombus growth on areas of severe vessel wall injury, 145A

## Thrombolytic therapy

See also specific agent

- Antecedent angina: a clinical marker for patients at high risk following thrombolytic therapy, 27A
- Augmentation of ejection fraction during ambulatory monitoring in thrombolysis patients with concomitant silent ventricular dysfunction: mechanistic implications, 96A
- Biphasic release of cardiac myosin light chains in patients with successful thrombolysis in acute myocardial infarction, 95A
- Early intervention with low dose aspirin in first acute transmural anterior myocardial infarction: infarct size, clinical outcome and follow-up, 27A
- Early post-thrombolysis assessment of necrosis and viability with rest-redistribution thallium scintigraphy: correlation with positron emission tomography (PET), 28A
- Intracoronary thrombolytic therapy in patients with refractory thrombus after intravenous treatment, 92A
- Limitations of exercise thallium single photon tomography early after myocardial infarction, 125A
- Long-term improvement of left ventricular function after myocardial infarction with and without thrombolytic therapy by late PTCA of the infarct-related artery, 26A
- Observer variability in TIMI flow grading: comparison to a new computer method for measurement of reperfusion kinetics, 91A
- Serial changes in left ventricular systolic and

diastolic function following successful thrombolytic therapy of myocardial infarction: assessment by Doppler echocardiography, 157A

#### **Thrombosis**

- Acute thrombotic reocclusion after percutaneous transluminal coronary angioplasty—should thrombolysis be attempted?, 58A
- Antiplatelet antibody [yE3 F(ab')<sub>2</sub>] prevents rethrombosis after tissue-type plasminogen activator induced coronary artery thrombolysis in a canine model, 32A
- Human percutaneous laser-assisted coronary angioplasty: efforts to reduce spasm and thrombosis, 61A
- Inability of thrombosis related markers to distinguish between unstable and stable angina pectoris, 15A
- Patients with ST segment deviation and unstable angina have consistent increases in thrombin activity, 15A
- Prevention of thrombosis by recombinant hirudin during arterial angioplasty in pigs: comparison with heparin, 77A

#### **Ticlopidine**

S.T.A.I. (study of ticlopidine in unstable angina), 238A

#### Tocainide

Therapeutic levels of tocainide produce deletetious hemodynamic and clinical effects in severe heart failure, 142A

## Tomography

- Echocardiographic computed tomography of the heart: preliminary results, 224A
- Improved diastolic function after aortic valve replacement assessed by ultrafast computed tomography (UFCT), 47A
- Iodine-123 phenylpentadecanoic acid tomography following dipyridamole infusion for the detection of coronary artery disease, 99A
- Right ventricular mass can be accurately assessed by ultrafast computed tomography, 8A
- Surgically resectable left ventricular aneurysm: specific characteristics by ultrafast computerized tomography, 47A
- Transesophageal echo computer tomography: a new method for dynamic 3-D imaging of the heart, 68A

## Tomography, positron emission,

- Early post-thrombolysis assessment of necrosis and viability with rest-redistribution thallium scintigraphy: correlation with positron emission tommography (PET), 28A
- Nitrogen-13 ammonia myocardial uptake at rest and with exercise in normal volunteers: quantification of coronary flow with dynamic positron emission tomography, 97A
- Quantitative measurement of myocardial blood flow and coronary flow reserve in patients with CAD employing O-15 water and positron emission tomography (PET), 97A

## Tomosynthesis

Digital flashing tomosynthesis (DFTS)—an alternative to cine technique in coronary angiography, 8A

#### Torsade de pointes

- Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil and class I agents, 249A
- 'Torsade de pointes' with quinidine and propranolol in conscious dogs with A-V block, 249A

#### Total heart volume

Geometric view of cardiac "efficiency", 86A

#### Trabeculation

Endocardial trabeculation: a marker for hibernating myocardium, 80A

## Transesophageal echocardiography

See Echocardiography, transesophageal

#### Transient ischemic attack

Potential role of transesophageal echo in the definition of intracardiac sources of emboli in transient ischemic attacks, 38A

#### Transposition of the great arteries

- Fate of the neoaortic valve after arterial repair of transposition of the great arteries, 240A
- Surgical management of aortic arch obstruction and transposition of the great arteries,

#### Triiodothyronine

Abnormal triiodothyronine is the strongest short-term prognostic factor identified in advanced heart failure, 181A

#### Truncus arteriosus

Depressed myocardial function and ventricular wall stress in neuralcrest ablated chick embryos, 118A

#### Tumor necrosis factor

Immunohistochemical detection and localization of tumor necrosis factor in human vasculature, 31A

#### Turbulence

Propogation of turbulence in aortic stenosis,

## UK-69.578

- Acute and chronic antihypertensive efficacy of atriopeptidase inhibition in rats, 76A
- Acute effects of atriopeptidase inhibition on plasma atrial natriuretic factor in chronic heart failure, 76A
- Atriopeptidase inhibitors, a novel class of drug that raises levels of endogenous atrial natriuretic factor—the preclinical pharmacology of UK-69,578, 75A
- Effect of UK-69,578, an atriopeptidase inhibitor, in a conscious dog model of cardiac insufficiency, 75A
- Pharmacologic elevation of endogenous atrial natriuretic factor in man using the atriiopeptidase inhibitor (UK 69578), 76A

## Uk-66914

Selectivity of a novel class III antiarrhythmic agent, 162A

## Ultrasound

- See also Doppler ultrasound; Echocardiography Doppler color flow imaging; Echocardiography
- Arterial color flow duplex sonography of the lower extremities before and after excimer laser angioplasty, 149A
- Detection of intravascular thrombus by high frequency intraluminal ultrasound angioscopy: in vitro and in vivo studies,

- Doppler-echocardiographic evaluation of the results of surgical ultrasonic
- decalcification of the aortic valve, 113A Evaluation of mixed atherosclerotic plaques by quantitative ultrasonic methods, 5A
- Experimental animal investigations of the potential for new approaches to diagnostic cardiac imaging in infants and small premature infants from intracardiac and transesophageal approaches using 20MHz realtime ultrasound imaging catheter,
- Intraluminal two-dimensional ultrasound angioscopic quantitation of arterial stenosis: comparison with external high-frequency ultrasound imaging and anatomy, 5A
- Intravascular ultrasound imaging catheter accurately measures area of stenotic aortic valves in vitro, 49A
- Intravascular ultrasound imaging of atherosclerotic coronary arteries: an in vitro validation study, 4A
- Intravascular ultrasound visualization of atheroma plaque removal by atherectomy,
- Noninvasive evaluation of the internal mammary artery by ultrasonic duplex-scanning, 116A
- Ultrasonic angioplasty using a new flexible wire system, 4A
- Utility of an intravascular ultrasound imaging device for arterial wall definition and atherectomy guidance, 222A

#### Ultrasound backscatter

- Cardiac cycle-dependent variation of integrated backscatter: an index of contractile performance that is not distorted by paradoxical septal motion, 52A
- Clinical application of ultrasonic backscatter in transesophageal echo to detect ischemic myocardium, 226A
- Cyclic variation of ultrasound backscatter in normal myocardium is view dependent: clinical studies using a real-time backscatter imaging system, 226A
- Identification of acute experimental left ventricular thrombi using a real-time backscatter imaging system, 59A

#### Umbrellas

Transcatheter umbrella closure of atrial defects, 120A

# Urokinase

See also Pro-urokinase

- Acute thrombotic reocclusion after percutaneous transluminal coronary angioplasty—should thrombolysis be attempted?, 58A
- Coronary thrombolysis with urokinase preactivated intravenous pro-urokinase, 193A
- Effects of aspirin on in vitro lysis with urokinase of combined platelet and fibrin thrombi, 91A
- Effects of urokinase and heparin on lesion geometry in unstable angina, 15A
- Intermittent urokinase therapy as a new strategy concept in untractable angina pectoris, 16A
- Myocardial infarction with minimal coronary atherosclerosis: a syndrome of young

- women with guarded long term prognosis, 27A
- Overview of bleeding risk from the TAMI trials: two agents are better than one,
- Pericarditis in the face of thrombolytic intervention denotes severe myocardial damage, 236A
- Platelet plasminogen activator inhibitor: purification and characterization of interaction with plasminogen activators and protein C. 1A
- Thrombolytic therapy in unstable angina and non Q-wave myocardial infarction: a randomized trial of urokinase versus aspirin, 15A

## Vagal stimulation

Characterization of the phasic responses to the neonatal sinus and atrioventricular node to brief vagal stimulation, 138A

#### Vagal tone

Effect of cholinergic agonist carbachol and cyclic guanosine monophosphate on sudden cardiac death: protection from ventricular fibrillation, 91A

#### Valve disease

- Consistency of color flow Doppler estimation of regurgitant flow rate across varying size orifice and multiple orifice communications using flow convergence concepts: studies in an "in-vitro" model, 22A
- How turbulent is a turbulent jet? An in vitro color flow Doppler study, 22A
- Limitations of color Doppler in analysis of valvular regurgitation, 22A
- Overestimation of regurgitant jet area by transesophageal as compared to transthoracic color Doppler, 68A
- Poor prognosis for fetuses with prenatally diagnosed tricuspid valve abnormalities,
- Validation in physiologic pulsatile flow of a new method for noninvasive quantification of valvular regurgitation based on conservation of momentum, 73A

# Valve prosthesis

- Comparison of long-term hemodynamic evaluation between percutaneous mitral valvuloplasty and mitral valvular replacement for severe mitral stenosis, 19A
- Does myocardial involvement in children with severe mitral regurgitation (MR) due to active rheumatic carditis (ARC) influence the outcome of mitral valve replacement (MVR), 146A
- Early experience with pulmonary autograft use for aortic valve replacement in pediatric patients, 120A
- Early and longterm results after mitral valvuloplasty as compared with valve replacement, 18A
- Echo evaluation of immediate and late failed mitral valve repair, 114A
- Estimation of effective mitral tissue prosthetic area using the continuity equation, 227A
- Evaluation of prosthetic valve performance by assessing the response to exercise using Doppler echocardiography, 233A Improved Doppler assessment of normal St.

- Jude's prosthetic aortic valves using the continuity equation, 51A
- Is there an improvement in coronary vasodilator capacity after aortic valve replacement?, 147A
- Is ultrasonic debridement of aortic stenosis a reliable alternative to valve replacement?,
- Long term prevention of bioprosthetic heart valve calcification: A1<sup>+++</sup> pretreatment, 136A
- Mitral prosthesis malfunction: utility of transesophageal echocardiography, 69A
- Persistence of increased diastolic stiffness late following aortic valve replacement, 148A
- Pulmonic valve autograft: echocardiographic factors predicting postoperative valve prosthesis, 123A
- Transesophageal echo in mitral prosthetic dysfunction: echo-surgical correlation, 69A
- Value and limitations of transesophageal color Doppler echocardiography for the recognition of transvalvular regurgitation in the normally functioning St. Jude value, 210A
- What is happening inside implanted homograft valve and conduit?, 124A

## Valvotomy, percutaneous mitral

- Percutaneous mitral valvotomy increases left atrial compliance without affecting its pressure-volume curve, 70A
- Percutaneous mitral valvotomy using the double balloon technique: determinant factors of mitral regurgitation, 69A

## Valvular vegetations

Prediction of risk for complications in patients with left sided infectious endocarditis, 72A

## Valvuloplasty

- Early and longterm results after mitral valvuloplasty as compared with open commissurotomy, 55A
- Early and longterm results after mitral valvuloplasty compared with valve replacement, 18A

# Valvuloplasty, balloon

- Advantages of Inoue-balloon (self-positioning balloon) in percutaneous transvenous mitral commissurotomy (PTMC) and aortic valvuloplasty, 18A
- Balloon aortic valvuloplasty: acute and chronic assessment of left ventricular hemodynamics and pressure-volume relationships, 54A
- Balloon mitral valvuloplasty: a multicentre study, 70A
- Catheter balloon valvuloplasty of necropsy stenotic aortic valves: etiology of aortic stenosis is a major factor in early "restenosis," 16A
- Clinical value of measuring atrionatriuretic factor after balloon aortic valvuloplasty, 56A
- Different immediate and long term outcome after percutaneous balloon valvuloplasty for severe aortic stenosis, contingent upon the type of valve, 54A
- Do hemodynamics overestimate the results of balloon mitral valvuloplasty?, 114A

  Doppler-echo evaluation of aortic stenosis

- severity pre- and post-balloon aortic valvuloplasty, 114A
- Dual balloon aortic valvuloplasty, despite augmenting acute hemodynamic improvement, fails to prevent post-valvuloplasty restenosis, 148A
- Failure of balloon aortic valvuloplasty to result in sustained clinical improvement in patients with depressed left ventricular function, 17A
- Follow-up balloon aortic valvuloplasty: results in 192 cases, 16A
- Gradual increase in left ventricular dimension with decrease in pressure half-time of transmitral flow following balloon mitral valvuloplasty, 59A
- Hemodynamic results and clinical follow-up in patients undergoing repeat balloon aortic valvuloplasty, 148A
- Hemodynamic results and follow-up of patients with iatrogenic atrial septal defect following balloon mitral valvuloplasty, 70A
- Is balloon valvuloplasty beneficial in patients with calculated critical aortic stenosis but low ejection fraction and pressure gradient?, 156A
- Long-term follow-up in 105 patients undergoing percutaneous balloon mitral valvuloplasty, 18A
- Long-term follow-up of patients undergoing closed transventricular mitral valve commissurotomy, 18A
- Mechanical resistance in aortic stenosis: an index of functional change after valvuloplasty, 147A
- New developments in aortic balloon valvuloplasty, 17A
- One-two year follow-up after primarily successful valvuloplasty for calcified aortic stenosis, 16A
- One-year clinical and Doppler echocardiographic follow-up of patients having double-balloon catheter balloon valvuloplasty for mitral stenosis, 115A
- Regression of infundibular pulmonary stenosis after successful balloon pulmonary valvuloplasty in adults, 56A
- Results and follow-up of a multicenter registry for balloon mitral valvuloplasty, 70A
- Second dilatation for restenosis following successful balloon aortic valvuloplasty: results, pathology and mechanism, 17A
- Serial assessment of mitral regurgitation in patients undergoing aortic valvuloplasty, 50A
- Six month follow-up of mitral balloon valvuloplasty, 17A

## Valvuloplasty, percutaneous mitral

- Comparison of long-term hemodynamic evaluation between percutaneous mitral valvuloplasty and mitral valvular replacement for mitral stenosis, 19A
- Contribution of transesophageal echocardiography in the ultrasound assessment of percutaneous mitral valvuloplasty, 51A
- Echo-Doppler evaluation of percutaneous mitral valvuloplasty correlates poorly with invasive measurements but is predictive of success, 52A

- Percutaneous mitral valvuloplasty in patients with previous surgical commissurotomy, 55A
- Predictive factors for success of percutaneous mitral valvuloplasty, 156A
- Response of atrial natriuretic factor to percutaneous mitral valvuloplasty, 56A

#### Vascular reserve

Current myocardial perfusion echo methodology precludes an accurate assessment of coronary vascular reserve, 116A

#### Vasoactive intestinal peptide

Direct coronary vasodilation induced by intracoronary vasoactive peptide in human coronary arteries, 141A

#### Vasoconstriction

- ANF blunts forearm vasoconstriction to lower body negative pressure in essential hypertensive patients, 83A
- Intravenous nitroglycerin prevents coronary artery vasoconstriction after PTCA, 59A
- Is digital vasoconstriction a marker for reversible pulmonary vasoconstriction in patients with pulmonary hypertension?, 151A
- Recovery of small and large artery vasoconstriction in severe heart failure following heart transplantation, 40A
- Vascular responses to leukocyte products in atherosclerotic primates, 2A

#### Vasodilation

- Comparison of regional coronary vasodilatory reserve between normal and post angioplasty arteries in the same patient, 188A
- Direct coronary vasodilation induced by intracoronary vasoactive intestinal peptide in human coronary arteries, 141A
- Evidence for an abnormal vasodilator response in hypertrophic cardiomyopathy, 117A
- Mechanisms of impaired vasodilation in the coronary microvasculature of patients with dilated cardiomyopathy, 178A
- Preserved flow-mediated vasodilation despite acetylcholine-induced vasoconstriction in atherosclerotic coronary arteries in man, 132A

## Vasodilator

Evidence for antithrombotic properties of nitrate-vasodilators in vivo but not in vitro, 231A

## Vasodilator reserve

Superoxide dismutase (SOD) prevents reperfusion-induced deterioration in coronary vasodilator reserve (CVR) and regional myocardial function, 110A

## Vasopressin

See Arginine vasopressin

#### Vasospasm

Comparison of acetylcholine and ergonovine in the provocation of coronary vasospasm, 132A

## Vena caval occlusions

Myocardial metabolic to mechanical energy transfer characteristics from single vena caval occlusions in conscious dogs, 87A

#### Venodilation

Nifedipine does not alter the venodilatory response to nitroglycerin, 154A

#### Venous return

Does ANF influence venous return?, 171A Ventricular assist device

- First human use of the hemopump, a catheter-mounted ventricular assist device. 121A
- Improved hemodynamic and left ventricular unloading during acute ischemia using the hemopump left ventricular assist device compared to intra aortic balloon counter pulsation, 160A

#### Ventricular dilatation

In the human, expression of ventricular ANF is independent of ventricular dilatation, 10A

#### Ventricular fibrillation

- Differences in surgical outcome for ventricular tachycardia and fibrillation, 214A
- Disparate effects of acute and chronic amiodarone on ventricular fibrillation threshold in dogs, 249A
- Effect of cholinergic agonist carbachol and cyclic guanosine monophosphate on sudden cardiac death, 91A
- Favorable outcome of patients with ventricular tachycardia or fibrillation and a normal electrophysiologic study, 20A
- Optimal catheter electrode dimensions for non-thoracotomy cardioversion/ defibrillation, 216A
- Reperfusion associated ventricular fibrillation: potentiation by left ventricular hypertrophy despite lidocaine pretreatment, 127A
- Ventricular fibrillation waveform characteristics associated with successful defibrillation using fixed low energy DC shock. 216A

## Ventricular filling

- Abnormal Doppler left ventricular filling following acute myocardial infarction and changes during early recovery, 157A
- Differential effects of right ventricular pressure and volume loading on left ventricular filling assessed by Doppler echocardiography, 196A
- Doppler left ventricular filling pattern is closely related to ventricular relaxation abnormalities, 197A
- Effect of decreased afterload on Doppler indices of left ventricular filling in pressure overload hypertrophy, 51A
- Influence of the pericardium on dynamic right and left ventricular filling, 207A
- Insignificance of "load dependence" on left ventricular relaxation and filling, 220A
- Mitral opening pressure strongly influences left ventricular peak rapid filling rate, 130A
- Pulsed Doppler echocardiographic mitral valve flow patterns and left ventricular chamber properties in patients with previous myocardial infarction, 209A

## Ventricular function

- Age-related changes in left ventricular performance during ischemic isometric exercise, 56A
- Ambulatory left ventricular function monitoring: are the ejection fraction measurements reproducible?, 96A Augmentation of myocardial function with

- dynamic cardiomyoplasty in a chronic canine model, 213A
- Balloon aortic valvuloplasty: acute and chronic assessment of left ventricular hemodynamics and pressure-volume relationships, 54A
- Comparison of effects of prolonged exercise on the right and left ventricles, 182A
- Comparison of three indices of left ventricular performance derived from pressure-volume loops in conscious dogs, 86A
- Coronary angioplasty in patients with severe depression of left ventricular function, 222A
- Determinants of improved global left ventricular function after tPA and deferred PTCA for acute MI, 92A
- Determinants of left ventricular size and function following mitral valve replacement, 148A
- Differences in neurohumoral activation in patients with left ventricular dysfunction with and without heart failure, 246A
- Does poor cardiac function preclude benefit from an automatic implantable cardioverter defibrillator, 65A
- Evaluation of left ventricular function immediately after successful balloon recanalization of chronic total coronary occlusions, 229A
- Failure of balloon aortic valvuloplasty to result in sustained clinical improvement in patients with depressed left ventricular function, 17A
- Impact of abnormal myocardial perfusion on ventricular function in patients with unstable angina, 239A
- Importance of contractility in determining left ventricular size and performance in patients with aortic regurgitation, 71A
- Improvement of global and regional left ventricular function with intravenous APSAC in acute myocardial infarction. Results of a multicenter double blind trial, 26A
- Initial validation of a new patient-borne miniature device for continuous monitoring of left ventricular function and ST-segment, 96A
- Left ventricular function at rest and the prevalence of ambulatory silent ischemia in coronary artery disease, 203A
- Left ventricular function in atrial fibrillation: a comparison before and after cardioversion, 207A
- Long-term improvement of left ventricular function after myocardial infarction with and without thrombolytic therapy by late PTCA of infarct-related artery, 26A
- Modulation of the fetal left ventricular function curve by the thoracic tissue, 136A
- No difference in long term left ventricular function after streptokinase and tissue plasminogen activator therapy in acute myocardial infarction, 96A
- Post-hypoperfusion reperfusion: orchestrated recovery from myocardial supply/demand imbalance maximizes heart function, 90A
- Postoperative monitoring of regional left ventricular function in man, 80A

- Preservation of ventricular performance with reduced ischemic dysfunction by intravenous nisoldipine during rapid atrial pacing, 46A
- Quantitative regional curvature analysis: determination of abnormal systolic and diastolic function by assessing shape throughout the cardiac cycle, 100A
- Rapid-onset pulmonary edema in patients with left ventricular systolic dysfunction: a syndrome related to right ventricular function, 179A
- Right ventricular infarction decreases left ventricular compliance and performance by a pericardial mechanism, 235A
- Right ventricular restrictive/constrictive physiology accompanies heart transplant rejection, 100A
- Serial changes in left ventricular systolic and diastolic function following successful thrombolytic therapy of myocardial infarction: assessment by Doppler echocardiography, 157A
- Sustained left ventricular function benefit one year after thrombolytic therapy, 26A
- Use of Doppler echocardiography in determination of left ventricular Dp/Dt max, 60A

#### Ventricular infarction

- Can hemodynamically significant RV infarction be identified by two-dimensional echocardiography?, 157A
- Right ventricular infarction decreases left ventricular compliance and performance by a pericardial mechanism, 235A

## Ventricular mass

- Determinants of left ventricular size and function following mitral valve replacement, 148A
- Gradual increase in left ventricular dimension with decrease in pressure half-time of transmitral flow following balloon mitral valvuloplasty, 59A
- Pathological involvements of left ventricle in chronic cor pulmonale, 151A
- Relationship between left ventricular mass regression and improved left ventricular filling in severe hypertension, 244A
- Right ventricular mass can be accurately assessed by ultrafast computed tomography, 8A

## Ventricular obstruction

Reducing left ventricular outflow tract obstruction in patients with hypertrophic cardiomyopathy by pacing-induced interventricular septal pre-excitation, 117A

#### Ventricular relaxation

- Doppler left ventricular filling pattern is closely related to ventricular relaxation abnormalities, 197A
- Insignificance of "load dependence" on left ventricular relaxation and filling, 220A
- Left ventricular relaxation in mitral stenosis before and after valvuloplasty, 55A

# Ventricular remodeling

Concentric remodeling of the left ventricle in hypertensive patients with normal ventricular mass, 245A

# Ventricular septal defect

Colour flow imaging as intra-operative

- angiography in ventricular septal defects—advantages and pitfalls?, 75A
- Does color Doppler echocardiography detect additional small muscular defects in infants with a large ventricular septal defect, 206A
- Doubly-committed subarterial ventricular septal defect: an eleven-year experience, 74A
- Estimation of pulmonary pressure inventricular septal defect; Doppler and color flow application, 52A
- Evaluation of ventricular septal defect complicating acute myocardial infarction: identification, localization and differentiation from mitral regurgitation by color Doppler flow imaging, 209A
- New method for noninvasive estimation of ventricular septal defect (VSD) shunt flow by color Doppler: imaging of the laminar flow convergence region on the left septal surface, 205A
- Quantitative evaluation of ventricular septal defects by color Doppler flow imaging, 24A
- Two dimensional/color Doppler assessment of ventricular septal defects, 24A
- Ventricular septal defect with aortic regurgitation: a 35 year experience, 121A

## Ventricular tachyarrhythmias

- Clinical evaluation of an implantable cardioverter/defibrillator with nonepicardial leads in patients with refractory ventricular tachyarrhythmias, 215A
- Holter-monitoring and programmed ventricular stimulation to predict clinical outcome in patients with malignant ventricular tachyarrhythmias, 34A

## Ventricular tachycardia

- Absence of late potentials in patients with repetitive monomorphic and exercise-facilitated ventricular tachycardia and no apparent heart disease, 177A
- Activation pattern during induction and maintenance of ventricular tachycardia in patients with coronary artery disease, 167A
- Characteristics of patients requiring epicardial vs endocardial Nd:YAG laser photoablation for ventricular tachycardia, 121A
- Combined therapy with type 1C and 1B agents: is it effective for ventricular tachycardia, 141A
- Differences in surgical outcome for ventricular tachycardia and fibrillation, 214A
- Does response to IA agents predict response to IC agents in patients with sustained ventricular tachycardia?, 174A
- Electrophysiologic testing in patients with asymptomatic nonsustained ventricular tachycardia predicts risk of sudden death or sustained ventricular tachycardia within the first year but not thereafter, 19A
- Endocardial isochronal patterns near the ventricular tachycardia site of origin with orthogonal electrode catheter array, 167A
- Enhancing prediction of induced ventricular tachycardia in patients with non-sustained

- runs by the signal averaged electrocardiogram, 34A
- Etiology of polymorphic ventricular tachycardia in the absence of prolonged QT, 21A
- Facilitation of ventricular tachycardia induction by stimulation at its site of origin, 167A
- Fatal and non fatal recurrences after endocardial resection: role of the underlying etiology, 212A
- Favorable outcome of patients with ventricular tachycardia or fibrillation and a normal electrophysiologic study, 20A
- High incidence of remission in patients with incessant ventricular tachycardia discontinued from antiarrhythmic drugs, 33A
- His-Purkinje activation during ventricular tachycardia: a determinant of QRS duration, 21A
- Incidence and substrate of sustained bundle branch reentry as a mechanism of ventricular tachycardia, 174A
- Late potentials and inducible ventricular tachycardia in surgically repaired congenital heart disease, 170A
- Mechanism of inducible ventricular tachycardia in patients with idiopathic dilated cardiomyopathy, 174A
- Multiple morphologies of induced ventricular tachycardia: role of antiarrhythmic drugs and clinical implications. 20A
- New criterion for diagnosis of sustained bundle branch reentry tachycardia, 21A
- Optimal catheter electrode dimensions for non-thoracotomy cardioversion/ defibrillation lead systems, 216A
- Periodicity of transmural and epicardial electrograms during sinus rhythm in patients with ventricular tachycardia, 191A
- Radiofrequency or direct current for ablation of ventricular tachycardia?, 176A
- Relation of inducibility of ventricular arrhythmias to symptoms in patients with hypertrophic cardiomyopathy—relevance to induced polymorphic ventricular tachycardia, 19A
- Role of electrophysiologic testing in patients with asymptomatic nonsustained ventricular tachycardia: relationship to ventricular function and the presence or absence of coronary artery disease, 19A
- Safety, efficacy and predictive value of drug termination of ventricular tachycardia,
- Should the induction of nonsustained ventricular tachycardia during baseline electrophysiologic testing constitute a positive study?, 20A
- Spontaneous changes in ventricular tachycardia cycle length: relevance to antitachycardia device development, 111A
- Surface ECG and intracardiac findings with the onset of entrainment in a pacing model of pseudoreentry ventricular tachycardia, 185A
- Sustained reentrant activation orients around arcs of abrupt functional conduction block in the canine post-infarction heart, 128A

- Termination of epinephrine-induced ventricular tachycardia by adenosine in halothane-anesthetized dogs, 249A
- Time-dependent electrophysiologic changes after experimental myocardial infarction: parallel changes in inducibility of ventricular arrhythmias and the signal-averaged electrocardiogram, 22A
- Transmural ventricular activation during consecutive cycles of sustained ventricular tachycardia, 167A
- Use-dependent prolongation of ventricular tachycardia cycle length by type 1A and 1C drugs, 21A
- Ventricular tachycardia is not the predominant cause of monitored sudden death in heart failure, 179A

#### Ventricular volume

- Chronic reduction of left ventricular volumes at rest and exercise in patients treated with nitroglycerin following anterior MI, 25A
- On important volumes in the left ventricle, 86A Three-dimensional echocardiography: a feasible non-invasive method to measure cardiac volume. 50A

#### Ventricular wall motion

- Echocardiographic assessment of mental stress induced wall motion abnormalities: comparison with exercise, 158A
- Echocardiographic evaluation of segmental wall motion early and late after thrombolytic therapy in acute myocardial infarction, 156A
- Effects of coronary revascularization on regional wall motion: an intraoperative echo study, 211A
- Heterogeneity of regional motion and shape in response to altered load, 101A
- Predictive value of In-111 antimyosin uptake for improvement of left ventricular wall motion after thrombolysis in acute myocardial infarction, 97A
- Recovery of myocardial metabolism by PET

precedes improvement of ischemic wall motion after PTCA, 28A

#### Ventriculography, radionuclide

Initial validation of a new patient-borne miniature device for continuous monitoring of left ventricular function and ST-segment, 96A

#### Ventriculotomy

- Elevated right ventricular pressure increases collagen in ventriculotomy scars in canines, 118A
- Late electrophysiologic sequelae of experimental right ventriculotomy with right ventricular hypertension, 170A

#### Verapamil

- Amiodarone on suppression of barium-induced triggered automaticity and early afterrepolarizations in Purkinje fibers relative to effects of verapamil and class I agents, 249A
- AV nodal reentry incorporating His bundle: verapamil sensitivity in retrograde fast pathway conduction, 173A
- Beta-blockers in syndrome X, 150A Cocaine-induced contraction of vascular smooth muscle is inhibited by calcium
- channel blockade, 78A
  Influence of antihypertensive therapy on
  plasma hormones in cardiac
  transplantation recipients: measurements
  at rest and during exercise, 81A
- Myocardial protection with verapamil during ischemia and reperfusion: assessment by magnetic resonance spectroscopy, 200A
- Rate-dependent cellular uncoupling contributes to the conduction changes in acute ischemia and is prevented by verapamil,
- Regression of atherosclerosis in cholesterol fed rabbits: effects of fish oil and verapamil,
- Sequential pulse defibrillation in man: effects of lidocaine and verapamil, 216A

  Verapamil as a potent cardioprotective agent

for coronary angioplasty: first clinical experience, 154A

#### Vitamin E

See also Alpha tocopherol

Model for congestive heart failure: selenium
and vitamin E deficient mini pigs, 208A

#### Warming up phenomenon

Warming up phenomenon cannot be explained by the increase incoronary flow reserve, 237A

# Wolff-Parkinson-White syndrome

- Age-related differences in the electrophysiologic properties of accessory pathways in patients with the Wolff-Parkinson-White syndrome, 204A
- Impact of coexisting heart disease on outcome of surgery for the Wolff-Parkinson-White syndrome, 138A
- Long-term followup of 109 pediatric patients treated for the Wolff-Parkinson-White syndrome, 170A
- Mechanism of the onset of atrial fibrillation in the Wolff-Parkinson-White syndrome, 203A
- 100% specificity in localizing ventricular preexcitation in WPW syndrome with the ECG, 10A
- Safety and efficacy of oral flecainide therapy in patients with the Wolff-Parkinson-White syndrome, 204A
- Sustained preexcited tachycardia: AV nodal rather than true antidromic reentry as the main mechanism, 204A

#### Women

- Cardiac transplantation for peripartum cardiomyopathy, 213A
- Exercise echocardiographic detection of coronary artery disease in women, 158A

## Worksite health promotion

Cardiovascular risk reduction through worksite health promotion, 134A

# Xamoterol

Absence of tachyphylaxis following chronic therapy with xamoterol, 247A

#### Zinterol

β-adrenergic agonists in nonfailing, failing, and transplanted human hearts, 143A