# 添付資料 4

「術前検査等ガイドライン」

- 2つの異なるガイドライン比較表

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Guideline Comparison

#### TITLE:

- 1) Am Coll Physicians 1996 Oct 25: Guidelines for assessing and managing the perioperative risk from coronary artery disease associated with major noncardiac surgery.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Guidelines for perioperative cardiovascular evaluation for noncardiac surgery. Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Perioperative Cardiovascular Evaluation for Noncardiac Surgery).

#### **ADAPTATION:**

- 1) Am Coll Physicians 1996 Oct 25: Not applicable: Guideline was not adapted from another source.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Not applicable: The guideline was not adapted from another source.

#### LENGTH:

- 1) Am Coll Physicians 1996 Oct 25: 4 pages (guideline); 16 pages (background paper)
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: 38 pages

#### **DEVELOPER(S):**

- 1) Am Coll Physicians 1996 Oct 25: American College of Physicians Medical Specialty Society
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: American College of Cardiology Medical Specialty Society

  American Heart Association Professional Association

#### **FUNDING SOURCE:**

1) Am Coll Physicians 1996 Oct 25: American College of Physicians

2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: The American College of Cardiology and the American Heart Association. No outside funding accepted for development of guideline.

#### COMMITTEE:

- 1) Am Coll Physicians 1996 Oct 25: Clinical Efficacy Assessment Subcommittee, Health and Public Policy Committee
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Committee on Perioperative Cardiovascular Evaluation for Noncardiac Surgery

#### **GROUP COMPOSITION:**

- 1) Am Coll Physicians 1996 Oct 25: Authors: Valerie A. Palda, MD, MSc; Allan S. Detsky, MD, PhD Members of Clinical Efficacy Assessment Subcommittee: George E. Thibault, MD, Chair; John R. Feussner, MD, Co-Chair; Anne-Marie J. Audet, MD; Gottlieb C. Freisinger Jr., MD; Daniel L. Kent, MD; Keith I. Marton, MD; Valerie Anne Palda, MD; John J. Whyte, MD; and Preston L. Winters, MD.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: The committee consisted of experts representing various disciplines of cardiovascular care, including general cardiology, noninvasive testing, vascular medicine, vascular surgery, anesthesiology, and arrhythmia management. *Names of Committee Members:* Kim A. Eagle, MD, FACC, Chair; Bruce H. Brundage, MD, FACC; Bernard R. Chaitman, MD, FACC; Gordon A. Ewy, MD, FACC; Lee A. Fleisher, MD, FACC; Norman R. Hertzer, MD; Jeffrey A. Leppo, MD, FACC; Thomas Ryan, MD, FACC; Robert C. Schlant, MD, FACC; William H. Spencer III, MD, FACC; John A. Spittell, Jr, MD, FACC; Richard D. Twiss, MD, FACC

#### **DISEASE/CONDITION:**

1) Am Coll Physicians 1996 Oct 25:

Coronary Artery Disease

Myocardial Infarction

2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: CARDIOVASCULAR DISEASE

Coronary artery disease

Myocardial infarction

Angina pectoris

Congestive heart failure

Arrhythmias and Conduction Defects

Hypertension

Cardiomyopathy

Valvular heart disease

Pulmonary vascular disease

#### **CATEGORY:**

- 1) Am Coll Physicians 1996 Oct 25: Management; Prevention; Risk Assessment/Prognosis
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Management; Evaluation

#### **CLINICAL SPECIALTY:**

- 1) Am Coll Physicians 1996 Oct 25: Internal Medicine; Cardiology
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Anesthesiology; Family Practice; Internal Medicine; Nuclear Medicine; General Surgery; Cardiology; Vascular Surgery

#### INTENDED USERS:

- 1) Am Coll Physicians 1996 Oct 25: Physicians
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Physicians

#### **OBJECTIVES:**

- 1) Am Coll Physicians 1996 Oct 25: To summarize available evidence on preoperative cardiac risk stratification so that the internist may 1) use clinical and electrocardiographic findings to stratify a patient's perioperative risk for myocardial infarction and death; 2) decide which tests provide useful additional risk-related information; and 3) understand the benefits, risks, and evidence surrounding the decision to undertake coronary revascularization before elective noncardiac surgery.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: To provide a framework for considering cardiac risk of noncardiac surgery in a variety of patient and surgical situations. To guide preoperative evaluation to perform an evaluation of the patient's current medical status, make recommendations concerning the risk of cardiac problems over the entire perioperative period, and provide a clinical risk profile that the patient, his or her primary physician, anesthesiologist, and surgeon can use in making treatment decisions.

#### **TARGET POPULATION:**

- 1) Am Coll Physicians 1996 Oct 25: Patients at perioperative risk from coronary artery disease associated with major noncardiac surgery.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Patients undergoing noncardiac surgery

#### **REVIEW METHODS:**

- 1) Am Coll Physicians 1996 Oct 25: External Peer Review; Comparison with Guidelines from Other Groups
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: External Peer Review

#### **DESCRIPTION OF REVIEW METHODS:**

- 1) Am Coll Physicians 1996 Oct 25: This background paper and the accompanying guidelines have been reviewed by using the American College of Physicians Clinical Efficacy Assessment process, which includes input from subcommittee review as well as multiple external reviews.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: The document was reviewed by three outside reviewers nominated by the ACC and by three outside reviewers nominated by the AHA, as well as reviewers nominated by the American Academy of Family Physicians, the Society for Vascular Surgery, the American Society of Anesthesiologists, and the Society of Cardiovascular Anesthesiologists. The final document represents the eighth iteration over 18 months, which included six drafts in committee and two additional drafts to incorporate key findings from

external review. The document is reviewed and approved by the American College of Cardiology Board of Trustees and the American Heart Association Science Advisory and Coordinating Committee.

#### **ENDORSER(S):**

- 1) Am Coll Physicians 1996 Oct 25: American College of Physicians Board of Regents
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Society for Vascular Surgery
  Society of Cardiovascular Anesthesiologists Medical Specialty Society

#### **OUTCOMES CONSIDERED:**

- 1) Am Coll Physicians 1996 Oct 25: Myocardial infarction (MI) and mortality (cardiac death) following major noncardiac surgery
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Perioperative cardiovascular morbidity (e.g., myocardial infarction) and mortality (e.g., cardiac death)

#### **COST ANALYSIS?:**

- 1) Am Coll Physicians 1996 Oct 25: No
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: No

#### **METHODS TO COLLECT EVIDENCE:**

- 1) Am Coll Physicians 1996 Oct 25: Searches of Electronic Databases; Handsearches of Published Literature (Primary Sources); Handsearches of Published Literature (Secondary Sources)
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Searches of Electronic Databases; Hand-searches of Published Literature (Primary Sources); Hand-searches of Published Literature (Secondary Sources)

#### **DESCRIPTION OF METHODS TO COLLECT EVIDENCE:**

- 1) Am Coll Physicians 1996 Oct 25: Search Strategy: A MEDLINE search was conducted to find relevant English-language articles reporting on clinical studies published between 1977 and 1 May 1996. The guideline developer used the Medical Subject Heading terms pre, peri and post-operative complications, pre-, peri- and post-operative care, heart disease, surgery, ± myocardial ischemia, ± risk factors, and excluding the term cardiac surgery. In addition, a manual search was done of the references found in identified articles, and references provided by experts were considered. Abstracts were included to minimize publication bias. All studies of perioperative management were considered. Exclusion Criteria: Studies related to clinical and noninvasive test evaluations were excluded if they were beyond the scope of this review (that is, those related to covered noncardiac outcomes, pediatrics, quality of life, postoperative functional status, cost-effectiveness, or patient preferences) or if the data were presented in a form that did not allow the calculation of sensitivity and specificity.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Medline search of the English literature from 1975 through 1994, review of selected journals from 1995

#### METHODS TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE:

- 1) Am Coll Physicians 1996 Oct 25: Weighting According to a Rating Scheme (Scheme Given)
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Weighting According to a Rating Scheme (Scheme Not Given)

#### **RATING SCHEME:**

- 1) Am Coll Physicians 1996 Oct 25: Estimation of Study Quality: For studies of clinical and noninvasive test evaluation, criteria were developed to assess methodologic quality. These assessments permit studies to be divided and classified as strong, fair, or weak. Qualitative assessment considered, in order of importance, study design, selection of the patient sample, blinding to test results and outcomes, and number of patients. Studies were considered to be of strong quality if they prospectively evaluated unselected, consecutive patients; if they were double blinded (if the test interpreter was blinded to outcome and the clinician was blinded to the test results); and if they included 100 or more patients. Studies considered to be of fair quality prospectively evaluated unselected, consecutive patients; used single blinding or no blinding; and enrolled fewer than 100 patients. Studies considered to be of weak quality did not meet the criteria for fair quality, usually because they had retrospective study designs. Studies of management were few; for these studies, the features considered to be important in qualitative assessment included randomization, examination of clinical rather than surrogate end points, and use of controls.
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Highest priority given to randomized trials; second highest priority given to observational database reports; lowest priority given to expert opinion.

#### **METHODS TO ANALYZE EVIDENCE:**

- 1) Am Coll Physicians 1996 Oct 25: Systematic Review
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: Systematic Review with Evidence Tables

#### **VIEW MAJOR RECOMMENDATIONS:**

- 1) Am Coll Physicians 1996 Oct 25: View Major Recommendations
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: View Major Recommendations

#### **AVAILABILITY OF FULL TEXT:**

- 1) Am Coll Physicians 1996 Oct 25: View Full-text Guideline
- 2) Am Coll Cardiol/Am Heart Assoc 1996 Mar 15: View Full-text Guideline

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# 添付資料 5

NGC 医療ガイドライン一覧表 (1999年1月時点) 1997–1998 Evidence based guidelines and recommendations for the community evaluation and medical management of children with acute gastroenteritis. Children's Hospital Medical Center (Cincinnati, OH). 1997. 46 pages.

1998–1999 Evidence based guidelines for the medical management of infants one year of age or less with a first time episode of bronchiolitis. Children's Hospital Medical Center (Cincinnati, OH). 1996 Dec 6 (revised 1998 Sep 10). 16 pages.

AACE clinical practice guidelines for growth hormone use in adults and children. American Association of Clinical Endocrinologists/American College of Endocrinology. 1998. 14 pages.

AACE clinical practice guidelines for the diagnosis and management of thyroid nodules. American Association of Clinical Endocrinologists/American College of Endocrinology. 1996 Jan. 9 pages.

AACE clinical practice guidelines for the evaluation and treatment of hyperthyroidism and hypothyroidism. American Association of Clinical Endocrinologists/American College of Endocrinology. 1996. 24 pages.

AACE clinical practice guidelines for the evaluation and treatment of hypogonadism in adult male patients. American Association of Clinical Endocrinologists/American College of Endocrinology. 1996. 28 pages.

AACE clinical practice guidelines for the evaluation and treatment of male sexual dysfunction. American Association of Clinical Endocrinologists/American College of Endocrinology. 1998. 16

AACE clinical practice guidelines for the management of thyroid carcinoma. American Association of Clinical Endocrinologists/American College of Endocrinology. 1997. 24 pages.

AACE clinical practice guidelines for the prevention and treatment of postmenopausal osteoporosis. American Association of Clinical Endocrinologists/American College of Endocrinology. 1996 Mar-Apr. 26 pages.

AACE guidelines for the management of diabetes mellitus. American Association of Clinical Endocrinologists/American College of Endocrinology. 1993. 10 pages.

AAFP policy on antepartum oxytocin privileges. American Academy of Family Physicians. 1989 Sep. 8 pages.

ACC/AHA guidelines for exercise testing. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Exercise Testing). American College of Cardiology/American Heart Association. 1997 Jul. 51 pages.

ACC/AHA guidelines for the clinical application of echocardiography: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Clinical Application of Echocardiography). American College of Cardiology/American Heart Association. 1997 Mar 18. 59 pages.

ACC/AHA guidelines for the management of patients with acute myocardial infarction. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. American College of Cardiology/American Heart Association. 1996 Nov 1. 100 pages.

Acupuncture. Office of Medical Applications of Research. 1997 Nov. In press.

Acute confusion/delirium. University of Iowa Gerontological Nursing Interventions Research Center. 1997. 41 pages.

Acute low back problems in adults. Agency for Health Care Policy and Research. 1994 Dec. 160

Acute management of autonomic dysreflexia: adults with spinal cord injury presenting to health—
care facilities. Paralyzed Veterans of America/Consortium for Spinal Cord Medicine. 1997 Feb. 22

Acute pain management. University of Iowa Gerontological Nursing Interventions Research Center.
1998 Apr 29. 37 pages.

Adult immunizations – including chemoprophylaxis against influenza A. United States Preventive Services Task Force. 1996. 23 pages .

Adult immunizations. American College of Preventive Medicine. 1998 Feb. 3 pages.

American Gastroenterological Association medical position statement: guidelines for the management of malnutrition and cachexia, chronic diarrhea, and hepatobiliary disease in patients with human immunodeficiency virus infection. American Gastroenterological Association. 1996 Dec.

Application of continuous positive airway pressure to neonates via nasal prongs or nasopharyngeal tube American Association for Respiratory Care. 1994 Aug. 7 pages.

ASHP therapeutic guidelines on angiotensin-converting-enzyme inhibitors in patients with left ventricular dysfunction. American Society of Health-System Pharmacists. 1997 Feb 1. 15 pages.

Aspirin prophylaxis for the primary prevention of myocardial infarction United States Preventive Services Task Force. 1996. 6 pages.

Aspirin prophylaxis in pregnancy. United States Preventive Services Task Force. 1996. 5 pages.

Aspirin therapy in diabetes. American Diabetes Association. 1998 Jan. 2 pages.

Assessing response to bronchodilator therapy at point of care American Association for Respiratory Care. 1995 Dec. 8 pages.

Automated ambulatory blood pressure and self-measured blood pressure monitoring devices: their role in the diagnosis and management of hypertension. American College of Physicians. 1992 Jul 10. 4 pages (guideline); 15 pages (background paper).

Bland aerosol administration American Association for Respiratory Care. 1993 Dec. 5 pages.

Body plethysmography American Association for Respiratory Care. 1994 Dec. 7 pages.

BRCA1 genetic screening. Kaiser Permanente Health Plan, Inc. Mid-Atlantic Permanente Medical Group. 1998 Feb 18. 4 pages.

Breast cancer screening for women ages 40-49. Office of Medical Applications of Research. 1997 Jan. 36 pages.

Bronchial provocation American Association for Respiratory Care. 1992. 5 pages.

Capillary blood gas sampling for neonatal & pediatric patients American Association for Respiratory Care. 1994 Dec. 4 pages.

Capnography/capnometry during mechanical ventilation American Association for Respiratory Care. 1995 Dec. 4 pages.

Cardiac rehabilitation. Agency for Health Care Policy and Research. 1995 Oct. 202 pages.

Cervical cancer screening. American College of Preventive Medicine. 1996 Oct. 3 pages.

Cervical cancer. Office of Medical Applications of Research. 1996 Apr. 39 pages.

Childhood immunization. United States Preventive Services Task Force. 1996. 14 pages.

Childhood immunizations. American College of Preventive Medicine. 1997. 4 pages.

Clinical practice guidelines for hemodialysis adequacy. National Kidney Foundation. 1997. 158

Clinical practice guidelines for peritoneal dialysis adequacy National Kidney Foundation. 1997. 214 pages.

Clinical practice guidelines for the treatment of anemia of chronic renal failure National Kidney Foundation. 1997. 174 pages.

Clinical practice guidelines for the treatment of unresectable non-small-cell lung cancer. American Society of Clinical Oncology. 1997 May. 22 pages.

Clinical practice guidelines for the use of tumor markers in breast and colorectal cancer. American Society of Clinical Oncology. 1996 (updated 1997). 34 pages.

Clinical practice guidelines for vascular access National Kidney Foundation. 1997. 156 pages.

Clinical use of esophageal manometry. American Gastroenterological Association. 1994 Jul 15. 20 pages.

Cochlear implants in adults and children. Office of Medical Applications of Research. 1995 May. 30 pages.

Colorectal cancer screening: clinical guidelines and rationale. American Gastroenterological Association. 1997 Feb. 48 pages.

Comprehensive adult eye evaluation. American Academy of Ophthalmology. 1996 Sep. 13 pages.

Coronary artery disease with myocardial infarction American College of Physicians. 1996 Apr 22. 5 pages (guideline); 21 pages (background paper).

Counseling to prevent dental and periodontal disease United States Preventive Services Task Force. 1996. 13 pages.

Counseling to prevent gynecologic cancers. United States Preventive Services Task Force. 1996. 10 pages.

Counseling to prevent HIV infection and other sexually transmitted diseases. United States Preventive Services Task Force. 1996. 14 pages.

Counseling to prevent household and recreational injuries United States Preventive Services Task Force. 1996. 27 pages.

Counseling to prevent low back pain. United States Preventive Services Task Force. 1996. 13

Counseling to prevent motor vehicle injuries United States Preventive Services Task Force. 1996. 15 pages.

Counseling to prevent tobacco use United States Preventive Services Task Force. 1996. 13 pages.

Counseling to prevent unintended pregnancy United States Preventive Services Task Force. 1996. 14 pages.

Counseling to prevent youth violence United States Preventive Services Task Force. 1996. 12

Counseling to promote a healthy diet. United States Preventive Services Task Force. 1996. 17

Counseling to promote physical activity United States Preventive Services Task Force. 1996. 13

Defibrillation during resuscitation American Association for Respiratory Care, 1995 Jul. 5 pages.

Delivery of aerosols to the upper airway American Association for Respiratory Care. 1994 Aug. 5
Diabetes mellitus and exercise. American Diabetes Association/American College of Sports

Medicine. 1990 Feb (revised 1990 Jul). 4 pages.

Diagnosing syncope. American College of Physicians. 1997 Jun 15. 8 pages (guideline); 11 pages (background paper).

Directed cough American Association for Respiratory Care. 1993 May. 5 pages.

Discharge planning for the respiratory care patient American Association for Respiratory Care. 1995 Dec. 5 pages.

Disease management of atopic dermatitis: a practice parameter. American Academy of Allergy, Asthma and Immunology/American College of Allergy, Asthma and Immunology/Joint Council of Allergy, Asthma and Immunology. 1997 Sep. 15 pages.

Domestic violence. Horizon Healthcare. 1997 Oct. 18 pages.

Early identification of hearing impairment in infants and young children Office of Medical Applications of Research. 1993. 24 pages.

Effective medical treatment of opiate addiction. Office of Medical Applications of Research. 1997 Nov. In press.

Elective repeat cesarean sections. Kaiser Permanente Health Plan, Inc. Mid-Atlantic Permanente Medical Group. 1998 Dec 16. 2 pages.

Endotracheal suctioning of mechanically ventilated adults and children with artificial airways American Association for Respiratory Care. 1993 May. 5 pages.

Evaluation of dyspepsia. American Gastroenterological Association. 1997 Nov 8. 17 pages.

Evidence based clinical protocol guideline for fever of uncertain source in infants 60 days of age or less. Children's Hospital Medical Center (Cincinnati, OH). 1998 Sep 10. 32 pages.

Exercise testing for evaluation of hypoxemia and/or desaturation American Association for Respiratory Care. 1992. 6 pages.

Fiberoptic bronchoscopy assisting American Association for Respiratory Care. 1993 Dec. 6 pages.

Genetic testing for cystic fibrosis. Office of Medical Applications of Research. 1997 Apr. 38 pages.

Guidelines for adolescent preventive services (GAPS). American Medical Association. 1997. 8

Guidelines for assessing and managing the perioperative risk from coronary artery disease associated with major noncardiac surgery. American College of Physicians. 1996 Oct 25. 4 pages (guideline); 16 pages (background paper).

Guidelines for clinical intracardiac electrophysiological and catheter ablation procedures. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Clinical Intracardiac Electrophysiologic and Catheter Ablation Procedures). American College of Cardiology/American Heart Association. 1995 Aug. 18 pages.

Guidelines for clinical use of cardiac radionuclide imaging. Report of the American College of Cardiology/American Heart Association Task Force on Assessment of Diagnostic and Therapeutic Cardiovascular Procedures (Committee on Radionuclide Imaging). American College of Cardiology/American Heart Association/American Society of Nuclear Cardiology. 1995 Feb. 27

Guidelines for electrocardiography. A report of the American College of Cardiology/American Heart Association Task Force on Assessment of Diagnostic and Therapeutic Cardiovascular Procedures (Committee on Electrocardiography). American College of Cardiology/American Heart Association. 1992 Mar. 9 pages.

Guidelines for laboratory evaluation in the diagnosis of Lyme disease. American College of Physicians. 1996 Feb 10. 5 pages (guideline); 14 pages (background paper).

Guidelines for medical treatment for stroke prevention. American College of Physicians. 1993 Nov 21. 2 pages (guideline); 12 pages (background paper).

Guidelines for perioperative cardiovascular evaluation for noncardiac surgery. Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Perioperative Cardiovascular Evaluation for Noncardiac Surgery). American College of Cardiology/American Heart Association. 1996 Mar 15. 38 pages.

Guidelines for the evaluation of management of heart failure: report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Evaluation and Management of Heart Failure). American College of Cardiology/American Heart Association. 1995 Nov 1. 21 pages.

Guidelines for the treatment of gallstones. American College of Physicians. 1993 Mar 29. 3 pages (guideline); 13 pages (background paper).

Guidelines for the use of enteral nutrition. American Gastroenterological Association. 1994 Nov 11. 22 pages.

Guidelines for using serum cholesterol, high-density lipoprotein cholesterol, and triglyceride levels as screening tests for preventing coronary heart disease in adults. American College of Physicians. 1995 Mar 20. 3 pages (guideline); 13 pages (background paper).

Guidelines on the use of esophageal pH recording. American Gastroenterological Association. 1996 Feb 3. 16 pages.

Heart failure: evaluation and care of patients with left-ventricular systolic dysfunction. Agency for Health Care Policy and Research. 1994 Jun. 122 pages.

Helicobacter pylori in peptic ulcer disease. Office of Medical Applications of Research. 1994. 23
Home uterine activity monitoring. United States Preventive Services Task Force. 1996. 3 pages.
Humidification during mechanical ventilation American Association for Respiratory Care. 1992. 4
Incentive spirometry American Association for Respiratory Care. 1991. 4 pages.

Individualized music. University of Iowa Gerontological Nursing Interventions Research Center. 1996. 16 pages.

Infant/toddler pulmonary function tests American Association for Respiratory Care. 1995 Jul. 8
Infectious disease testing for blood transfusions. Office of Medical Applications of Research. 1995
Jan. 27 pages.

Intermittent positive pressure breathing American Association for Respiratory Care. 1993 Dec. 7 Intrapartum electronic fetal monitoring. United States Preventive Services Task Force. 1996. 6 In-vitro pH and blood gas analysis and hemoximetry American Association for Respiratory Care. 1993 May. 6 pages.

Irritable bowel syndrome. American Gastroenterological Association. 1996 Nov 10. 20 pages.

Long-term invasive mechanical ventilation in the home American Association for Respiratory Care. 1995 Dec. 8 pages.

Magnetic resonance imaging of the brain and spine: a revised statement. American College of Physicians. 1993 Jul 18. 4 pages (guideline); 16 pages (background paper).

Management of airway emergencies American Association for Respiratory Care. 1995 Jul. 12 pages. Management of cancer pain. Agency for Health Care Policy and Research. 1994 Mar (amended) . 257 pages.

Management of decision-making incapacity in nursing homes. PinnacleHealth. 1996 Mar. 14 pages. Management of hepatitis C. Office of Medical Applications of Research. 1997 Mar. 42 pages.

Management of temporomandibular disorders Office of Medical Applications of Research. 1997 Nov. 24 pages.

Managing otitis media with effusion in young children. American Academy of Pediatrics. 1994 Nov. 8 pages.

Metabolic measurement using indirect calorimetry during mechanical ventilation American Association for Respiratory Care. 1994 Dec. 6 pages.

Morbidity and mortality of dialysis Office of Medical Applications of Research, 1993, 33 pages,

Nasotracheal suctioning American Association for Respiratory Care. 1992 Aug. 4 pages.

Neonatal time-triggered, pressure-limited, time-cycled mechanical ventilation American Association for Respiratory Care. 1994 Aug. 9 pages.

Neurogenic bowel management in adults with spinal cord injury. Paralyzed Veterans of America/Consortium for Spinal Cord Medicine. 1998 Mar. 39 pages.

Nutrition recommendations and principles for people with diabetes mellitus American Diabetes Association. 1986 Oct (revised 1998 Jul). 5 pages.

Nutritional strategies efficacious in the prevention or treatment of coronary heart disease (CHD). Nutrition Screening Initiative. 1998. 16 pages.

Nutritional strategies efficacious in the prevention or treatment of hypertension. Nutrition Screening Initiative. 1998. 15 pages.

Optimal calcium intake. Office of Medical Applications of Research. 1994 Jun. 31 pages.

Otitis media with effusion in young children. Agency for Health Care Policy and Research. 1994 Jul. 108 pages.

Ovarian cancer: screening, treatment, and followup Office of Medical Applications of Research. 1994 Apr 5-7. 21 pages.

Oxygen therapy in the acute care hospital. American Association for Respiratory Care. 1991. 4
Oxygen therapy in the home or extended care facility American Association for Respiratory Care. 1992. 5 pages.

Patient-ventilator system checks American Association for Respiratory Care. 1992 Aug. 5 pages.

Pediatric eye evaluations. American Academy of Ophthalmology. 1997 Sep. 17 pages.

Pediatric preventive care: health assessments and anticipatory guidance. Kaiser Permanente Health Plan, Inc. Mid-Atlantic Permanente Medical Group. 1997 May 21. 4 pages.

Pertussis vaccination: use of acellular pertussis vaccines among infants and young children. Centers for Disease Control and Prevention. 1997 Mar 28 . 25 pages.

Pharmacological management of alcohol withdrawal: a meta-analysis and evidence-based practice guideline. American Society of Addiction. 1997 Jul 9. 7 pages.

Physical activity and cardiovascular health Office of Medical Applications of Research. 1995 Dec. 33 pages.

Poliomyelitis prevention in the United States: introduction of a sequential vaccination schedule of inactivated poliovirus vaccine followed by oral poliovirus vaccine. Recommendations of the Advisory Committee on Immunization Practices. Centers for Disease Control and Prevention. 1997 Jan 24. 25 pages.

Poliomyelitis prevention: recommendations for use of inactivated poliovirus vaccine and live oral poliovirus vaccine. American Academy of Pediatrics. 1997 Feb. 6 pages.

Polysomnography American Association for Respiratory Care. 1995 Dec. 8 pages.

Postexposure prophylaxis for selected infectious diseases. United States Preventive Services Task Force. 1996. 12 pages.

Postmenopausal hormone prophylaxis United States Preventive Services Task Force. 1996. 14 Post-stroke rehabilitation. Agency for Health Care Policy and Research. 1995 May. 248 pages.

Postural drainage therapy American Association for Respiratory Care. 1991. 9 pages.

Practice guidelines for examination of the placenta College of American Pathologists. 1997 May.

Practice parameter for the use of red blood cell transfusions. College of American Pathologists. 1998 Feb. 8 pages.

Practice parameter: management of hyperbilirubinemia in the healthy term newborn. American Academy of Pediatrics. 1994 Oct. 8 pages.

Practice parameter: the management of acute gastroenteritis in young children. American Academy of Pediatrics. 1996 Mar 3. 12 pages.

Practice parameter: the neurodiagnostic evaluation of the child with a first simple febrile seizure. American Academy of Pediatrics. 1996 May. 4 pages.

Practice parameters for allergen immunotherapy. American Academy of Allergy, Asthma and Immunology/American College of Allergy, Asthma and Immunology/Joint Council of Allergy, Asthma and Immunology. 1996 Aug 29. 11 pages.

Practice parameters for allergy diagnostic testing. American Academy of Allergy, Asthma and Immunology/American College of Allergy, Asthma and Immunology/Joint Council of Allergy, Asthma and Immunology. 1995 Dec. 82 pages.

Practice parameters for child custody evaluation. American Academy of Child and Adolescent Psychiatry. 1997 Jun 6. 11 pages.

Practice parameters for the assessment and treatment of children and adolescents with anxiety disorders. American Academy of Child and Adolescent Psychiatry. 1997 May 14. 15 pages.

Practice parameters for the assessment and treatment of children and adolescents with bipolar disorder. American Academy of Child and Adolescent Psychiatry. 1996 Jun 15. 20 pages.

Practice parameters for the assessment and treatment of children and adolescents with conduct disorder. American Academy of Child and Adolescent Psychiatry. 1997 Mar 31. 18 pages.

Practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder. American Academy of Child and Adolescent Psychiatry. 1998 Mar 26.

Practice parameters for the assessment and treatment of children and adolescents with schizophrenia. American Academy of Child and Adolescent Psychiatry. 1994 Jan 14. 20 pages.

Practice parameters for the assessment and treatment of children and adolescents with substance use disorders. American Academy of Child and Adolescent Psychiatry. 1997 May 14. 5 pages.

Practice parameters for the assessment and treatment of children, adolescents, and adults with attention-deficit/hyperactivity disorder. American Academy of Child and Adolescent Psychiatry. 1997 Feb 14. 37 pages.

Practice parameters for the diagnosis and management of immunodeficiency. American Academy of Allergy, Asthma and Immunology/American College of Allergy, Asthma and Immunology/Joint Council of Allergy, Asthma and Immunology. 1995 Aug 31. 13 pages.

Practice parameters for the diagnosis and treatment of asthma. American Academy of Allergy, Asthma and Immunology/American College of Allergy, Asthma and Immunology/Joint Council of Allergy, Asthma and Immunology. 1995 Nov. 163 pages.

Practice parameters for the forensic evaluation of children and adolescents who may have been physically or sexually abused. American Academy of Child and Adolescent Psychiatry. 1996 Aug 22. 20 pages.

Practice parameters for the psychiatric assessment of children and adolescents. American Academy of Child and Adolescent Psychiatry. 1995 Mar 13. 16 pages.

Practice parameters for the psychiatric assessment of infants and toddlers (0-36 months). American Academy of Child and Adolescent Psychiatry. 1997 Oct. 15 pages.

Prenatal care. Kaiser Permanente Health Plan, Inc. Mid-Atlantic Permanente Medical Group. 1997 Dec 17. 4 pages.

Preoperative testing: healthy, asymptomatic patient prior to elective surgery. Horizon Healthcare. 1996 May (updated 1997 Sep). 7 pages.

Prevention of plague: recommendations of the Advisory Committee on Immunization Practices (ACIP). Centers for Disease Control and Prevention. 1996 Dec 13 . 15 pages.

Prevention of thromboembolism in spinal cord injury. Paralyzed Veterans of America/Consortium for Spinal Cord Medicine. 1997 Feb. 25 pages.

Prevention of varicella: recommendations of the Advisory Committee on Immunization Practices (ACIP). Centers for Disease Control and Prevention. 1996 Jul 12. 36 pages.

Primary angle-closure glaucoma. American Academy of Ophthalmology. 1996 Sep. 15 pages.

Primary open-angle glaucoma. American Academy of Ophthalmology. 1996 Sep. 28 pages.

Proactive management of labor for term, singleton, vertex presentations. Kaiser Permanente Health

Plan, Inc. Mid-Atlantic Permanente Medical Group. 1998 Dec 16. 3 pages.

Progressive resistance training University of Jowa Gerentelegical Nursing Intercentions Research

Progressive resistance training. University of Iowa Gerontological Nursing Interventions Research Center. 1997. 25 pages.

Pulse oximetry American Association for Respiratory Care. 1991. 4 pages.

Recognition and initial assessment of Alzheimer's disease and related dementias. Agency for Health Care Policy and Research. 1996 Nov. 128 pages.

Recommendations for the use of hematopoietic colony-stimulating factors: evidence-based, clinical practice guidelines. American Society of Clinical Oncology. 1994 Nov (updated 1997), 37 pages.

Recommendations for use of haemophilus B conjugate vaccines and a combined diphtheria, tetanus, pertussis, and haemophilus B vaccine. Recommendations of the Advisory Committee on Immunization Practices (ACIP). Centers for Disease Control and Prevention. 1993 Sep 17.15

Recommended breast cancer surveillance guidelines. American Society of Clinical Oncology. 1997 May. 8 pages.

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## 添付資料 6

NGC ガイドラインの1例

(米国循環器病学会:心臓超音波検査の適応

に関するガイドライン)

## 米国ガイドライン評価センター

## 要約

(原文は60ページだが、ガイドラインセンターが15ページに要約したもの)

## タイトル:

米国循環器病学会/米国心臓病協会の心臓超音波検査適用に関するガイドライン: 米国循環器病学会/米国心臓病協会の診療ガイドライン研究班 超音波心臓検査の臨床適応委員会による報告。

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## 改作:

他のガイドラインを参考にして作られたものではなく、本ガイドラインはオリジナルなものです。

## 発表日:

1997年の3月18日

## 主な勧告:

ドップラー超音波心臓検査の使用に関するガイドラインは、他の ACC/AHA ガイドラインの中で使用される表示分類システム(例えばクラス I、II および III)を用います:

クラス I: その処置や治療が有用で効果があるとの証拠が存在したり一般的な見解の合意が得られているもの。

クラス II: その処置や治療の有用性/効能に関する複数の相反するデータや証拠が存在して見解が分かれているもの。

クラス IIa: その処置や治療の有用性/効能性に関する証拠や意見が、どちらかといえばこれを支持しているもの。

クラス IIb: その処置や治療の有用性/効能性に関する証拠や意見が不十分なもの。

クラス III:その処置や治療の効果はない、あるいは有害であるとの証拠や一般的な見解 合意が得られているもの。

## 心疾患を見つけるための検診としての超音波心臓検査の適応

		クラス
1.		I .
2.	心臓移植提供者になる可能性のある場合。	I
3.	マルファン症候群やこれに類する結合組織疾患と思われる患者。	I
4.	心毒性のある抗癌剤治療に入る前の癌患者の心機能評価。	$\mathbf{I}$
5.	心機能障害を生じる恐れのある全身疾患を持つ患者。	IIb
6.	一般人。	III
7.	臨床所見のない運動選手。	III

## 心雑音評価での超音波心臓検査の適応

クラス

1. 心肺機能の有症状患者の心雑音。

I

- 2. 無症状の心雑音ではあるが、臨床所見上で器質的心疾患を中等度以上疑わせるものがある場合。
- 3. 無症状の心雑音で器質的心疾患の可能性が低いものの、臨床所見では十分に器質的心疾患を除外することができない場合。 IIa
- 4. 大人の無症状の心雑音で、経験を十分に積んだ医師が機能性雑音と判断するもの。

III

## 高血圧患者での超音波心臓検査の適応

クラス

- 1. 安静時左室機能、心肥大、または求心性リモデリングの評価が治療方針の決定に必要と考えられる場合。(左室機能の項参照) I 2. 虚血性心疾患による機能評価が必要な場合。(虚血性心疾患の項参照) I
- 3. 臨床症状の変化や投薬治療の調整の際に行うフォローアップ検査としての左室のサイズ測定と機能評価。 I
- 4. 収縮期異常の有無にかかわらず、左室の拡張期機能障害を調べるための検査。

Ha

- 5. 心電図で左室肥大の所見を伴わない境界型高血圧症例で、高血圧治療開始を考察する場合。この目的には、簡略化した検査のみで十分。 IIa
- 6. 予後推定のために左室機能を調べること。 IIb
- 7. 左室心筋量の減少を目安に高血圧を治療する場合の、再評価。 III
- 8. 無症状の高血圧患者の左室機能再評価。 III

## 弁狭窄での超音波心臓検査の適応

		クラス
1.	診断;心血管動態の評価。	
2.	左心室(LV)および右心室(RV)のサイズ、機能および(a	または)血行動態の評価。
		I
3.	既知の弁狭窄患者の症状や徴候が変化した場合の再評	価。
4.	既知の弁狭窄妊婦の血行動態や心室機能評価。	I
5.	高度の弁狭窄をもった無症候性患者の再評価。	I
6.	軽度あるいは中等度の弁狭窄患者の血行動態評価。	IIa
7.	左室機能不全または心肥大を合併する無症状の軽度あ	るいは中等度の大動脈弁狭窄患者の再評価。
		IIa
8.	症状と徴候が安定している軽度あるいは中等度の大動	脈弁狭窄患者の再評価。
		IIa
9.	徴候が安定し無症状の軽度の大動脈弁狭窄患者で、左	室の機能とサイズが正常の症例に対するル
	ーチン検査。	III
10.	). 徴候が安定し無症状の軽度および中等度の僧帽弁狭窄	患者に対するルーチン検査。
		III
(さ 照の	さらに「心臓弁膜症および人工弁(Prosthetic Valves)に (のこと)	こ関する治療での超音波心臓検査の適応を参

## 失神患者の超音波心臓検査の適応

		クラス
1.	臨床上心原性の失神が疑われる場合。	 I
2.	運動負荷がかかった際に生じた失神。	I
3.	パイロットなどのリスクの高い職業者の失神。	IIa
4.	病歴および身体所見で原因が不明の失神。	IIb
5.	以前の心臓超音波検査や他の検査で原因が判明している失	伸が繰り返された場合。
		III
6.	心疾患が疑われない患者の失神。	III
7.	典型的な神経性の失神。	III

以下同様の形式で、臨床上遭遇するありとあらゆる場合が想定されて、約30項目に分類された超音 波検査の適応が論じられている。上記の5項目も含めて英文のまま掲載する。

## Indications for Echocardiography in the Evaluation of Heart Murmurs

- 1. A murmur in a patient with cardiorespiratory symptoms. I
- 2. A murmur in an asymptomatic patient if the clinical features indicate at least a moderate probability that the murmur is reflective of structural heart disease. I
- 3. A murmur in an asymptomatic patient in whom there is a low probability of heart disease but in whom the diagnosis of heart disease cannot be reasonably excluded by the standard cardiovascular clinical evaluation. IIa
- 4. In an adult, an asymptomatic heart murmur that has been identified by an experienced observer as functional or innocent. III

## Indications for Echocardiography in Valvular Stenosis

- 1. Diagnosis; assessment of hemodynamic severity. I
- 2. Assessment of left ventricular (LV) and right ventricular (RV) size, function, and/or hemodynamics. I
- 3. Reevaluation of patients with known valvular stenosis with changing symptoms or signs. I
- 4. Assessment of changes in hemodynamic severity and ventricular compensation in patients with known valvular stenosis during pregnancy. I
- 5. Reevaluation of asymptomatic patients with severe stenosis. I
- 6. Assessment of the hemodynamic significance of mild to moderate valvular stenosis by Doppler echocardiography. IIa
- 7. Reevaluation of patients with mild to moderate aortic stenosis with LV dysfunction or hypertrophy even without clinical symptoms. IIa
- 8. Reevaluation of patients with mild to moderate aortic valvular stenosis with stable signs and symptoms. IIb
- 9. Routine reevaluation of asymptomatic adult patients with mild aortic stenosis having stable physical signs and normal LV size and function.
- 10. Routine reevaluation of asymptomatic patients with mild to moderate mitral stenosis and stable physical signs. III
- (See also "Indications for Echocardiography in Interventions for Valvular Heart Disease and Prosthetic Valves.")

#### Indications for Echocardiography in Native Valvular Regurgitation

1. Diagnosis; assessment of hemodynamic severity. I

I

- 2. Initial assessment and reevaluation (when indicated) of LV and RV size, function, and/or hemodynamics. I
- 3. Reevaluation of patients with mild to moderate valvular regurgitation with changing symptoms.
- 4. Reevaluation of asymptomatic patients with severe regurgitation. I
- 5. Assessment of changes in hemodynamic severity and ventricular compensation in patients with known valvular regurgitation during pregnancy.
- 6. Reevaluation of patients with mild to moderate regurgitation with ventricular dilation without clinical symptoms. I
- 7. Assessment of the effects of medical therapy on the severity of regurgitation and ventricular compensation and function.
- 8. Reevaluation of patients with mild to moderate mitral regurgitation without chamber dilation and without clinical symptoms. IIb
- 9. Reevaluation of patients with moderate aortic regurgitation without chamber dilation and without clinical symptoms. IIb
- 10. Routine reevaluation in asymptomatic patients with mild valvular regurgitation having stable physical signs and normal LV size and function. III

(See also "Indications for Echocardiography in Interventions for Valvular Heart Disease and Prosthetic Valves.")

#### Indications for Echocardiography in Mitral Valve Prolapse

- 1. Diagnosis; assessment of hemodynamic severity, leaflet morphology, and/or ventricular compensation in patients with physical signs of MVP. I
- 2. To exclude MVP in patients who have been diagnosed but without clinical evidence to support the diagnosis. IIa
- 3. To exclude MVP in patients with first-degree relatives with known myxomatous valve disease. IIa
- 4. Risk stratification in patients with physical signs of MVP or known MVP. IIa
- 5. Exclusion of MVP in patients with ill-defined symptoms in the absence of a constellation of clinical symptoms or physical findings suggestive of MVP or a positive family history.
- 6. Routine repetition of echocardiography in patients with MVP with no or mild regurgitation and no changes in clinical signs or symptoms. III

#### Indications for Echocardiography in Infective Endocarditis: Native Valves

1. Detection and characterization of valvular lesions, their hemodynamic severity, and/or

ventricular compensation. \* I

- 2. Detection of vegetations and characterizations of lesions in patients with congenital heart disease suspected of having infective endocarditis. I
- 3. Detection of associated abnormalities (e.g., abscesses, shunts, etc). \* I
- 4. Reevaluation studies in complex endocarditis (e.g., virulent organism, severe hemodynamic lesion, aortic valve involvement, persistent fever or bacteremia, clinical change, or symptomatic deterioration). I
- 5. Evaluation of patients with high clinical suspicion of culture-negative endocarditis. \* I
- 6. Evaluation of bacteremia without a known source.\* IIa
- 7. Risk stratification in established endocarditis. \* IIa
- 8. Routine reevaluation in uncomplicated endocarditis during antibiotic therapy. IIb
- 9. Evaluation of fever and nonpathological murmur without evidence of bacteremia. III \*TEE may provide incremental value in addition to information obtained by TTE. The role of TEE
- in first-line examination awaits further study.

## Indications for Echocardiography in Interventions for Valvular Heart Disease and

#### Prosthetic Valves

- 1. Assessment of the timing of valvular intervention based on ventricular compensation, function, and/or severity of primary and secondary lesions. I
- 2. Selection of alternative therapies for mitral valve disease (such as balloon valvuloplasty, operative valve repair, valve replacement).\* I
- 3. Use of echocardiography (especially TEE) in performing interventional techniques (e.g., balloon valvotomy) for valvular disease. I
- 4. Postintervention baseline studies for valve function (early) and ventricular remodeling (late). I
- 5. Reevaluation of patients with valve replacement with changing clinical signs and symptoms; suspected prosthetic dysfunction (stenosis, regurgitation) or thrombosis.\* I
- 6. Routine reevaluation study after baseline studies of patients with valve replacements with mild to moderate ventricular dysfunction without changing clinical signs or symptoms. IIa
- 7. Routine reevaluation at the time of increased failure rate of a bioprosthesis without clinical evidence of prosthetic dysfunction. IIb
- 8. Routine reevaluation of patients with valve replacements without suspicion of valvular dysfunction and unchanged clinical signs and symptoms. III
- 9. Patients whose clinical status precludes therapeutic interventions. III \*TEE may provide incremental value in addition to information obtained by TTE.

## Indications for Echocardiography in Infective Endocarditis: Prosthetic Valves

<sup>1.</sup> Detection and characterization of valvular lesions, their hemodynamic severity, and/or

ventricular compensation. \* I

- 2. Detection of associated abnormalities (e.g., abscesses, shunts, etc). \* I
- 3. Reevaluation in complex endocarditis (e.g., virulent organism, severe hemodynamic lesion, aortic valve involvement, persistent fever or bacteremia, clinical change, or symptomatic deterioration). \* I
- 4. Evaluation of suspected endocarditis and negative cultures. \* I
- 5. Evaluation of bacteremia without known source. \* I
- 6. Evaluation of persistent fever without evidence of bacteremia or new murmur.\* IIa
- 7. Routine reevaluation in uncomplicated endocarditis during antibiotic therapy. \* IIb
- 8. Evaluation of transient fever without evidence of bacteremia or new murmur. III \*TEE may provide incremental value in addition to that obtained by TTE.

## Indications for Echocardiography in Patients With Chest Pain

- 1. Diagnosis of underlying cardiac disease in patients with chest pain and clinical evidence of valvular, pericardial, or primary myocardial disease (see sections II, IV through VI, VIII, and IX). I
- 2. Evaluation of chest pain in patients with suspected acute myocardial ischemia, when baseline ECG is nondiagnostic and when study can be obtained during pain or soon after its abatement (see section IV). I
- 3. Evaluation of chest pain in patients with suspected aortic dissection (see section VIII).
- 4. Chest pain in patients with severe hemodynamic instability (see section XIII). I
- 5. Evaluation of chest pain for which a noncardiac etiology is apparent. III
- 6. Diagnosis of chest pain in a patient with electrocardiographic changes diagnostic of myocardial ischemia/infarction. III

# Indications for Echocardiography in the Diagnosis of Acute Myocardial Ischemic Syndromes

- 1. Diagnosis of suspected acute ischemia or infarction not evident by standard means. I
- 2. Measurement of baseline LV function. I
- 3. Patients with inferior myocardial infarction and bedside evidence suggesting possible RV infarction  $\,\,$  I
- 4. Assessment of mechanical complications and mural thrombus. \* I
- 5. Identification of location/severity of disease in patients with ongoing ischemia. IIa
- 6. Diagnosis of acute myocardial infarction already evident by standard means. III \*TEE is indicated when TTE studies are not diagnostic.

#### Indications for Echocardiography in Risk Assessment, Prognosis, and Assessment of

#### Therapy in Acute Myocardial Ischemic Syndromes

- 1. Assessment of infarct size and/or extent of jeopardized myocardium. I
- 2. In-hospital assessment of ventricular function when the results are used to guide therapy. I
- 3. In-hospital or early postdischarge assessment of the presence/extent of inducible ischemia whenever baseline abnormalities are expected to compromise electrocardiographic interpretation. \* I
- 4. In-hospital or early postdischarge assessment of the presence/extent of inducible ischemia in the absence of baseline abnormalities expected to compromise ECG interpretation. \* IIa
- 5. Assessment of myocardial viability when required to define potential efficacy of revascularization. \*\* IIa
- 6. Reevaluation of ventricular function during recovery when results are used to guide therapy. IIa
- 7. Assessment of ventricular function after revascularization. IIa
- 8. Assessment of long-term prognosis (> 2 years after acute myocardial infarction). IIb
- 9. Routine reevaluation in the absence of any change in clinical status. III
- \*Exercise or pharmacological stress echocardiogram.
- \*\*Dobutamine stress echocardiogram.

## Indications for Echocardiography in Diagnosis and Prognosis of Chronic Ischemic Heart

#### Disease

- 1. Diagnosis of myocardial ischemia in symptomatic individuals. \* I
- 2. Assessment of global ventricular function at rest. I
- 3. Assessment of myocardial viability (hibernating myocardium) for planning revascularization. \*\* I
- 4. Assessment of functional significance of coronary lesions (if not already known) in planning percutaneous transluminal coronary angioplasty. \* I
- 5. Diagnosis of myocardial ischemia in selected patients with an intermediate or high pretest likelihood of coronary artery disease. \* IIb
- 6. Assessment of an asymptomatic patient with positive results from a screening treadmill test. IIb
- 7. Assessment of global ventricular function with exercise. \* IIb
- 8. Screening of asymptomatic persons with a low likelihood of coronary artery disease. III
- 9. Routine periodic reassessment of stable patients for whom no change in therapy is contemplated.
- 10. Routine substitution for treadmill exercise testing in patients for whom ECG analysis is

expected to suffice. III

- \*Exercise or pharmacological stress echocardiogram.
- \*\*Dobutamine stress echocardiogram.

## Indications for Echocardiography in Assessment of Interventions in Chronic Ischemic

#### Heart Disease

- 1. Assessment of LV function when needed to guide institution and modification of drug therapy in patients with known or suspected LV dysfunction.
- 2. Assessment for restenosis after revascularization in patients with atypical recurrent symptoms.  $\star$  I
- 3. Assessment for restenosis after revascularization in patients with typical recurrent symptoms. \* IIa
- 4. Routine assessment of asymptomatic patients after revascularization. III
- \*Exercise or pharmacological stress echocardiography.

## Indications for Echocardiography in Patients With Dyspnea, Edema, or Cardiomyopathy

- 1. Assessment of LV size and function in patients with suspected cardiomyopathy or clinical diagnosis of heart failure. \* I
- 2. Edema with clinical signs of elevated central venous pressure when a potential cardiac etiology is suspected or when central venous pressure cannot be estimated with confidence and clinical suspicion of heart disease is high. \* I
- 3. Dyspnea with clinical signs of heart disease. I
- 4. Patients with unexplained hypotension, especially in the intensive care unit. \* I
- 5. Patients exposed to cardiotoxic agents, to determine the advisability of additional or increased dosages. I
- 6. Reevaluation of LV function in patients with established cardiomyopathy when there has been a documented change in clinical status or to guide medical therapy. I
- 7. Reevaluation of patients with established cardiomyopathy when there is no change in clinical status. IIb
- 8. Reevaluation of patients with edema when a potential cardiac cause has already been demonstrated. IIb
- 9. Evaluation of LV ejection fraction in patients with recent (contrast or radionuclide) angiographic determination of ejection fraction. III
- 10. Routine reevaluation in clinically stable patients in whom no change in management is contemplated. III
- 11. In patients with edema, normal venous pressure, and no evidence of heart disease. III \*TEE is indicated when TTE studies are not diagnostic.

## Indications for Echocardiography in Pericardial Disease

- 1. Patients with suspected pericardial disease, including effusion, constriction, or effusive-constrictive process. I
- 2. Patients with suspected bleeding in the pericardial space, e.g., trauma, perforation, etc.
- 3. Follow-up study to evaluate recurrence of effusion or to diagnose early constriction. Repeat studies may be goal directed to answer a specific clinical question. I
- 4. Pericardial friction rub developing in acute myocardial infarction accompanied by symptoms such as persistent pain, hypotension, and nausea. I
- 5. Follow-up studies to detect early signs of tamponade in the presence of large or rapidly accumulating effusions. A goal-directed study may be appropriate. IIa
- 6. Echocardiographic guidance and monitoring of pericardiocentesis. IIa
- 7. Postsurgical pericardial disease, including postpericardiotomy syndrome, with potential for hemodynamic impairment. IIb
- 8. In the presence of a strong clinical suspicion and nondiagnostic TTE, TEE assessment of pericardial thickness to support a diagnosis of constrictive pericarditis.
- 9. Routine follow-up of small pericardial effusion in clinically stable patients. III
- 10. Follow-up studies in patients with cancer or other terminal illness for whom management would not be influenced by echocardiographic findings. III
- 11. Assessment of pericardial thickness in patients without clinical evidence of constrictive pericarditis. III
- 12. Pericardial friction rub in early uncomplicated myocardial infarction or early postoperative period after cardiac surgery. III

## Indications for Echocardiography in Patients With Cardiac Masses and Tumors

- 1. Evaluation of patients with clinical syndromes and events suggesting an underlying cardiac mass. I
- 2. Evaluation of patients with underlying cardiac disease known to predispose to mass formation for whom a therapeutic decision regarding surgery or anticoagulation will depend on the results of echocardiography. I
- 3. Follow-up or surveillance studies after surgical removal of masses known to have a high likelihood of recurrence (ie, myxoma). I
- 4. Patients with known primary malignancies when echocardiographic surveillance for cardiac involvement is part of the disease staging process. I
- 5. Screening persons with disease states likely to result in mass formation but for whom no clinical evidence for the mass exists. IIb
- 6. Patients for whom the results of echocardiography will have no impact on diagnosis or clinical decision making. III

#### Indications for Echocardiography in Suspected Thoracic Aortic Disease

#### TTE TEE

- 1. Aortic dissection. IIa I
- 2. Aortic aneurysm. I\* I
- 3. Aortic rupture. IIb I
- 4. Aortic root dilatation in Marfan or other connective tissue syndromes. I IIb
- 5. Degenerative or traumatic aortic disease with clinical atheroembolism. IIb I
- 6. Follow-up of aortic dissection, especially after surgical repair without suspicion of complication or progression. I IIa
- 7. Follow-up of aortic dissection especially after surgical repair when complication or progression is suspected. IIa I
- 8. First-degree relative of a patient with Marfan syndrome or other connective tissue disorder. I IIb
- \*Especially for aortic root aneurysm.

## Indications for Echocardiography in Pulmonary Disease

- . Suspected pulmonary hypertension. I
- 2. Pulmonary emboli and suspected clots in the right atrium or ventricle or main pulmonary artery branches.  $\star$  I
- 3. For distinguishing cardiac versus noncardiac etiology of dyspnea in patients in whom all clinical and laboratory clues are ambiguous.\* I
- 4. Follow-up of pulmonary artery pressures in patients with pulmonary hypertension to evaluate response to treatment. I
- 5. Lung disease with clinical suspicion of cardiac involvement (suspected cor pulmonale). I
- 6. Measurement of exercise pulmonary artery pressure. IIa
- 7. Patients being considered for lung transplantation or other surgical procedure for advanced lung disease. \* IIa
- 8. Lung disease without any clinical suspicion of cardiac involvement. III
- 9. Reevaluation studies of RV function in patients with chronic obstructive lung disease without a change in clinical status. III
- \*TEE is indicated when TTE studies are not diagnostic.

## Indications for Echocardiography in Hypertension

- 1. When assessment of resting LV function, hypertrophy, or concentric remodeling is important in clinical decision making (see LV function). I
- 2. Detection and assessment of functional significance of concomitant coronary artery disease (see coronary disease). \* I

- 3. Follow-up assessment of LV size and function in patients with LV dysfunction when there has been a documented change in clinical status or to guide medical therapy. I
- 4. Identification of LV diastolic filling abnormalities with or without systolic abnormalities. IIa
- 5. Assessment of LV hypertrophy in a patient with borderline hypertension without LV hypertrophy on ECG to guide decision making regarding initiation of therapy. A limited goal-directed echocardiogram may be indicated for this purpose. IIa
- 6. Risk stratification for prognosis by determination of LV performance. IIb
- 7. Reevaluation to guide antihypertensive therapy based on LV mass regression. III
- 8. Reevaluation in asymptomatic patients to assess LV function. III
- \*Stress echocardiography.

## Indications for Echocardiography in Patients With Neurological Events or Other

#### Vascular Occlusive Events

- 1. Patients of any age with abrupt occlusion of a major peripheral or visceral artery. I
- 2. Younger patients (typically <45 years) with cerebrovascular events. I
- 3. Older patients (typically >45 years) with neurological events without evidence of cerebrovascular disease or other obvious cause. I
- 4. Patients for whom a clinical therapeutic decision (anticoagulation, etc) will depend on the results of echocardiography. I
- 5. Patients with suspicion of embolic disease and with cerebrovascular disease of questionable significance. IIa
- 6. Patients with a neurological event and intrinsic cerebrovascular disease of a nature sufficient to cause the clinical event. IIb
- 7. Patients for whom the results of echocardiography will not impact a decision to institute anticoagulant therapy or otherwise alter the approach to diagnosis or treatment.

## Indications for Echocardiography in Patients With Arrhythmias and Palpitations

- 1. Arrhythmias with clinical suspicion of structural heart disease. I
- 2. Arrhythmia in a patient with a family history of a genetically transmitted cardiac lesion associated with arrhythmia such as tuberous sclerosis, rhabdomyoma, or hypertrophic cardiomyopathy. I
- 3. Evaluation of patients as a component of the workup before electrophysiological ablative procedures. I
- 4. Arrhythmia requiring treatment. IIa
- 5. TEE guidance of transseptal catheterization and catheter placement during ablative procedures. IIa
- 6. Arrhythmias commonly associated with, but without clinical evidence of, heart disease. IIb

- 7. Evaluation of patients who have undergone radiofrequency ablation in the absence of complications. (In centers with established ablation programs, a postprocedural echocardiogram may not be necessary.) IIb
- 8. Palpitation without corresponding arrhythmia or other cardiac signs or symptoms. III
- 9. Isolated premature ventricular contractions for which there is no clinical suspicion of heart disease. III

#### Indications for Echocardiography Before Cardioversion

- 1. Patients requiring urgent (not emergent) cardioversion for whom extended precardioversion anticoagulation is not desirable. \* I
- 2. Patients who have had prior cardioembolic events thought to be related to intra-atrial thrombus. \* I
- 3. Patients for whom anticoagulation is contraindicated and for whom a decision about cardioversion will be influenced by TEE results. \* I
- 4. Patients for whom intra-atrial thrombus has been demonstrated in previous TEE.\* I
- 5. Evaluation of patient for whom a decision concerning cardioversion will be impacted by knowledge of prognostic factors (such as LV function, coexistent mitral valve disease, etc).
- 6. Patients with atrial fibrillation of <48 hours' duration and other heart disease. \* IIa
- 7. Patients with atrial fibrillation of <48 hours' duration and no other heart disease.\* IIb
- 8. Patients with mitral valve disease or hypertrophic cardiomyopathy who have been on long-term anticoagulation at therapeutic levels before cardioversion. \* IIb
- 9. Patients undergoing cardioversion from atrial flutter. IIb
- 10. Patients requiring emergent cardioversion. III
- 11. Patients who have been on long-term anticoagulation at therapeutic levels and who do not have mitral valve disease or hypertrophic cardiomyopathy before cardioversion. III
- 12. Precardioversion evaluation of patients who have undergone previous TEE and with no clinical suspicion of a significant interval change. III \*TEE only.

## Indications for Echocardiography in the Patient With Syncope

- 1. Syncope in a patient with clinically suspected heart disease. I
- 2. Periexertional syncope. I
- 3. Syncope in a patient in a high-risk occupation (e.g., pilot). IIa
- 4. Syncope of occult etiology with no findings of heart disease on history or physical exam. IIb
- 5. Recurrent syncope in a patient in whom previous echocardiographic or other testing demonstrated a cause of syncope. III
- 6. Syncope in a patient for whom there is no clinical suspicion of heart disease. III

7. Classic neurogenic syncope. III

#### Indications for Echocardiography to Screen for the Presence of Cardiovascular Disease

- 1. Patients with a family history of genetically transmitted cardiovascular disease. I
- 2. Potential donors for cardiac transplantation. I
- 3. Patients with phenotypic features of Marfan syndrome or related connective tissue diseases.

I

Ι

Ι

- 4. Baseline and reevaluations of patients undergoing chemotherapy with cardiotoxic agents. I
- 5. Patients with systemic disease that may affect the heart. IIb
- 6. The general population. III
- 7. Competitive athletes without clinical evidence of heart disease. III

## Conditions and Settings in Which Transesophageal Echocardiography Provides the Most

#### Definitive Diagnosis in the Critically III and Injured

The hemodynamically unstable patient with suboptimal TTE images.

The hemodynamically unstable patient on a ventilator.

Major trauma or postoperative patients (unable to be positioned for adequate TTE).

Suspected aortic dissection.

Suspected aortic injury.

Other conditions in which TEE is superior (see section on valvular disease).

#### Indications for Echocardiography in the Critically III

- \_\_\_\_\_
- 1. The hemodynamically unstable patient. I
- 2. Suspected aortic dissection (TEE). I
- 3. The hemodynamically stable patient not expected to have cardiac disease. III
- 4. Reevaluation follow-up studies on hemodynamically stable patients. III

## Indications for Echocardiography in the Critically Injured\*

- 1. Serious blunt or penetrating chest trauma (suspected pericardial effusion or tamponade).
- 2. Mechanically ventilated multiple-trauma or chest trauma patient. I
- 3. Suspected preexisting valvular or myocardial disease in the trauma patient. I
- 4. The hemodynamically unstable multiple-injury patient without obvious chest trauma but with a mechanism of injury suggesting potential cardiac or aortic injury (deceleration or crush).

- 5. Widening of the mediastinum, postinjury suspected aortic injury (TEE). I
- 6. Potential catheter, guidewire, pacer electrode, or pericardiocentesis needle injury with or without signs of tamponade. I
- 7. Evaluation of hemodynamics in multiple-trauma or chest trauma patients with pulmonary artery catheter monitoring and data disparate with clinical situation. IIa
- 8. Follow-up study on victims of serious blunt or penetrating trauma. IIa
- 9. Suspected myocardial contusion in the hemodynamically stable patient with a normal ECG. III \*The use of TTE or TEE includes Doppler techniques when indicated and available and with appropriately trained and experienced sonographer and interpreter.

TEE is indicated when TTE images are suboptimal. TEE often provides incremental information.

## Indications for Echocardiography in the Adult Patient With Congenital Heart Disease

- 1. Patients with clinically suspected congenital heart disease, as evidenced by signs and symptoms such as a murmur, cyanosis, or unexplained arterial desaturation, and an abnormal ECG or radiograph suggesting congenital heart disease. I
- 2. Patients with known congenital heart disease on follow-up when there is a change in clinical findings. I
- 3. Patients with known congenital heart disease for whom there is uncertainty as to the original diagnosis or when the precise nature of the structural abnormalities or hemodynamics is unclear. I
- 4. Periodic echocardiograms in patients with known congenital heart lesions and for whom ventricular function and atrioventricular valve regurgitation must be followed (e.g., patients with a functionally single ventricle after Fontan procedure, transposition of the great vessels after Mustard procedure, 1-transposition and ventricular inversion, and palliative shunts). I
- 5. Patients with known congenital heart disease for whom following pulmonary artery pressure is important (e.g., patients with moderate or ventricular septal defects, atrial septal defects, single ventricle, or any of the above with an additional risk factor for pulmonary hypertension). I
- 6. Periodic echocardiography in patients with surgically repaired (or palliated) congenital heart disease with the following: change in clinical condition or clinical suspicion of residual defects, LV or RV function that must be followed, or when there is a possibility of hemodynamic progression or a history of pulmonary hypertension. I
- 7. To direct interventional catheter valvotomy, radiofrequency ablation valvotomy interventions in the presence of complex cardiac anatomy. I
- 8. A follow-up Doppler echocardiographic study, annually or once every 2 years, in patients with known hemodynamically significant congenital heart disease without evident change in clinical condition. IIb
- 9. Multiple repeat Doppler echocardiography in patients with repaired patent ductus arteriosus, atrial septal defect, ventricular septal defect, coarctation of the aorta, or bicuspid aortic valve without change in clinical condition. III
- 10. Repeat Doppler echocardiography in patients with known hemodynamically insignificant

congenital heart lesions (e.g., small atrial septal defect, small ventricular septal defect) without a change in clinical condition. III

#### Indications for Neonatal Echocardiography

- 1. Cyanosis, respiratory distress, congestive heart failure, or abnormal arterial pulses. I
- 2. Chromosomal abnormality or major extracardiac abnormality associated with a high incidence of coexisting cardiac abnormality. I
- 3. Lack of expected improvement in cardiopulmonary status in a premature infant with a clinical diagnosis of pulmonary disease. I
- 4. Systemic maternal disease associated with neonatal comorbidity. I
- 5. Loud or abnormal murmur or other abnormal cardiac finding in an infant. I
- 6. Presence of a syndrome associated with cardiovascular disease and dominant inheritance or multiple affected family members. I
- 7. Presence of a syndrome associated with heart disease, with or without abnormal cardiac findings, for which an urgent management decision is needed. I
- 8. Cardiomegaly on chest radiograph.
- 9. Dextrocardia, abnormal pulmonary or visceral situs by clinical, electrocardiographic, or radiographic examination. I
- 10. Arrhythmias or other abnormalities on standard ECG suggesting structural heart disease or peripartum myocardial injury. I
- 11. Clinical suspicion of residual or recurrent abnormality, poor ventricular function, pulmonary artery hypertension, thrombus, sepsis, or pericardial effusion after cardiovascular surgical therapy for congenital heart disease. I
- 12. Nonimmunologic fetal hydrops. I
- 13. Follow-up assessment of a neonate with patent ductus arteriosus who has undergone medical or surgical intervention. I
- 14. Short, soft murmur at the lower left sternal border in the neonate. IIa
- 15. Failure to thrive in the absence of definite abnormal clinical findings. IIa
- 16. Presence of a syndrome associated with a high incidence of congenital heart disease for which there are no abnormal cardiac findings and no urgency of management decisions. IIb
- 17. History of nonsustained fetal ectopy in the absence of postpartum arrhythmias. III

## Indications for Echocardiography in the Infant, Child, and Adolescent

- 1. Atypical or pathological murmur or other abnormal cardiac finding in an infant or older child.
- 2. Cardiomegaly on chest radiograph. I
- 3. Dextrocardia, abnormal pulmonary or visceral situs on clinical, electrocardiographic, or radiographic examination. I
- 4. Patients with a known cardiac defect to assess timing of medical or surgical therapy. I

- 5. Immediate preoperative evaluation for cardiac surgery of a patient with a known cardiac defect to guide cardiac surgical management and inform the patient and family of risks of surgery. I
- 6. Patient with known cardiac lesion and change in physical finding. I
- 7. Postoperative congenital or acquired heart disease with clinical suspicion of residual or recurrent abnormality, poor ventricular function, pulmonary artery hypertension, thrombus, sepsis, or pericardial effusion. I
- 8. Presence of a syndrome associated with cardiovascular disease and dominant inheritance or multiple affected family members. I
- 9. Patients with a family history of genetically transmitted myocardial disease, with or without abnormal cardiac finding. I
- 10. Phenotypic findings of Marfan syndrome or Ehlers-Danlos syndrome. I
- 11. Baseline and follow-up examinations of patients with neuromuscular disorders having known myocardial involvement. I
- 12. Presence of a syndrome associated with a high incidence of congenital heart disease when there are no abnormal cardiac findings. I
- 13. Exercise-induced precordial chest pain or syncope. I
- 14. "Atypical," "non-vasodepressor" syncope without other cause. I
- 15. Failure to thrive in the absence of definite abnormal clinical findings. IIb
- 16. In a child or adolescent, an asymptomatic heart murmur identified by an experienced observer as functional or an insignificant cardiovascular abnormality. III
- 17. In an otherwise asymptomatic child or adolescent, chest pain identified by an experienced observer as musculoskeletal in origin. III

## Indications for Echocardiography in Pediatric Patients With Arrhythmias/Conduction

#### Disturbances

- 1. Arrhythmia in the presence of an abnormal cardiac finding. I
- 2. Arrhythmia in a patient with a family history of a genetically transmitted cardiac lesion associated with arrhythmia, such as tuberous sclerosis or hypertrophic cardiomyopathy. I
- 3. Complete atrioventricular block or advanced second-degree atrioventricular block. I
- 4. Complete or high-degree secondary atrioventricular block. I
- 5. Arrhythmia requiring treatment.
- 6. Ventricular arrhythmia in a patient referred for evaluation for competitive sports. IIa
- 7. Evidence of preexcitation on ECG. IIa
- 8. Preexcitation on ECG in the absence of abnormal cardiac findings. IIb
- 9. Recurring arrhythmia not requiring treatment in the presence of normal findings on examination. IIb
- 10. Sinus arrhythmia or isolated extrasystoles in a child with otherwise normal cardiac findings and no family history of a genetically transmitted abnormality associated with arrhythmia.

## Indications for Echocardiography in Pediatric Acquired Cardiovascular Disease

- 1. Baseline studies and reevaluation as clinically indicated on all pediatric patients with suspected or documented Kawasaki disease, myopericarditis, HIV, or rheumatic fever. I
- 2. Postcardiac or cardiopulmonary transplant to monitor for signs of acute or chronic rejection, thrombus, and cardiac growth. I
- 3. Baseline and reevaluation examinations of patients receiving cardiotoxic therapeutic agents.

4. Patients with clinical evidence of myocardial disease. I

I

- 5. Patients with severe renal disease and an abnormal cardiac finding. I
- 6. Donors undergoing evaluation for cardiac transplantation. I
- 7. An acutely ill child with suspected bacterial sepsis or rickettsial disease. IIa
- 8. Follow-up examinations after acute rheumatic fever in patients with normal cardiac findings.
- 9. A single late follow-up study after acute pericarditis with no evidence of recurrence or chronic pericardial disease. IIb
- 10. Long-term follow-up studies in patients with Kawasaki disease who have no coronary abnormalities during the acute phase of the disease process. III

#### Indications for Echocardiography in Pediatric Cardiopulmonary Disease

- 1. Any patient with clinical findings of pulmonary artery hypertension. I
- 2. Baseline study of patients with cystic fibrosis and no findings of cor pulmonale. IIa

## Indications for Echocardiography in Pediatric Thromboembolic Disease States

- 1. Thromboembolic event in an infant, child, or adolescent. I
- 2. Finding or family history of tuberous sclerosis.
- 3. Appearance of sepsis, cyanosis, or right-heart failure in a patient with a long-standing indwelling catheter. I
- 4. Systemic embolization or acute-onset hypertension in a patient with right-to-left-shunting and an indwelling catheter. I
- 5. Superior vena caval syndrome in the presence of central venous catheter. I
- 6. Patient with indwelling catheter and fever but without evidence of pulmonary or systemic embolization. IIb
- 7. Routine surveillance of asymptomatic patients with indwelling catheter. III

## Indications for Transesophageal Echocardiography in Pediatric Patients

<sup>1.</sup> Any patient with congenital or acquired heart disease needing echocardiography when significant diagnostic information cannot be obtained by TTE. I

- 2. Monitoring and guidance during cardiothoracic procedures when there is a risk for residual shunting, valvular insufficiency, obstruction, or myocardial dysfunction. I
- 3. Guidance of catheter/device placement during interventional catheterization/radiofrequency ablation in patients with congenital heart disease. I
- 4. Study of patients with intra-atrial baffle in whom the potential for thrombus is of concern because of elevated central venous pressures, atrial chamber dilation, increasing cyanosis, or the appearance of arrhythmia. I
- 5. Patients with long-term placement of intravascular devices in whom thrombus or vegetation is suspected. I
- 6. Patients with a prosthetic valve in whom thrombus or vegetation is suspected. I
- 7. Any patient with suspected endocarditis and inadequate transthoracic acoustical window. I
- 8. Performing TEE in a patient who has not previously had careful study by TTE. III
- 9. Patients with structural esophageal abnormality. III

#### Indications for Fetal Echocardiography

- 1. Abnormal-appearing heart on general fetal ultrasound examination. I
- 2. Fetal tachycardia, bradycardia, or persistent irregular rhythm on clinical or screening ultrasound examination. I
- 3. Maternal/family risk factors for cardiovascular disease, such as a parent, sibling, or first-degree relative with congenital heart disease. I
- 4. Maternal diabetes. I
- 5. Maternal systemic lupus erythematosus. I
- 6. Teratogen exposure during a vulnerable period.
- 7. Other fetal system abnormalities (including chromosomal). I
- 8. Performance of transplacental therapy or presence of a history of significant but intermittent arrhythmia. Reevaluation examinations are required in these conditions. I
- 9. Fetal distress or dysfunction of unclear etiology. IIa
- 10. Previous history of multiple fetal losses. IIb
- 11. Multiple gestation. IIb
- 12. Low-risk pregnancies with normal anatomic findings on ultrasound examination. III
- 13. Occasional premature contractions without sustained tachycardia or signs of dysfunction or distress. III
- 14. Presence of a noncardiovascular system abnormality when evaluation of the cardiovascular system will not alter either management decisions or fetal outcome. III

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None provided.

#### DEVELOPER (S):

American College of Cardiology (ACC ) - Medical Specialty Society

American Heart Association (AHA ) - Professional Association

#### COMMITTEE:

Committee on Clinical Application of Echocardiography

#### GROUP COMPOSITION:

The committee was composed of both university-affiliated and practicing physicians and those with specific echocardiographic expertise and senior clinicians who use the technique. Two general physicians (one general internal medicine and one family practitioner) also served on the committee.

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#### ENDORSER(S):

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最後の部分は再度日本語訳を添付する。

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なし

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委員会は、大学に勤務する医師および開業医師の両方、ならびに超音波心臓検査法の専門知識および技術を有する上級の臨床医、さらに一般的な 2 人の内科医(一般的な 1 人の内科医および 1 人の家庭医)も参加した。

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## ガイドライン・ステータス::

更新--このガイドラインは前のガイドライン(米国循環器病学会/米国心臓病協会の心臓超音波検査適用に関するガイドライン:米国循環器病学会/米国心臓病協会の診断治療処置の診療ガイドライン研究班 超音波心臓検査の臨床適応委員会による報告。 J Am Coll Cardiol 1990年12月;16[7]:1505-28および循環1990年12月;82[6]:2323-45。)をアップデートしたもの。

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