Bibliography

Change Healthcare Clinical Evidence Classification

References cited in the clinical content are classified according to the type of evidence presented. The class ratings, I through V, are intended to provide a classification of the evidence but are not necessarily hierarchical. Classifications appear in parentheses at the end of each reference. References followed by an (NC) are not classified; examples include pre-published research or information from government, manufacturer, laboratory, or patient education websites.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Type of Evidence</th>
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<tr>
<td>Class I</td>
<td>Meta-analysis, technology assessment, or systematic review</td>
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<td>Class II</td>
<td>Randomized controlled trial</td>
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<td>Class III</td>
<td>Observational or epidemiologic study</td>
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<td>Class IV</td>
<td>Evidence-based guideline</td>
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<td>Class V</td>
<td>Expert opinion, panel consensus, literature review, text or reference book,</td>
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<td>descriptive study, case report, or case series</td>
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Class I

Class I sources synthesize the results of multiple studies. When quantitative synthesis is possible, meta-analyses can provide a more accurate estimate of the effect or association size than individual smaller studies can. A Class I study that finds insufficient evidence to support or refute an intervention (due to a lack of appropriate primary research) is inconclusive. A potential weakness of Class I studies is that they may only assess published research, potentially leaving their findings vulnerable to publication bias.
Class II

A randomized controlled trial (RCT) is an experimental study design in which subjects are randomly assigned to an intervention or a control group. An RCT is the gold standard for testing cause and effect relationships. Intention-to-treat analysis should be performed to account for missing data points.

Class III

Observational or epidemiologic studies can suggest an association between events or findings. These associations cannot be used to establish causality. Cross-sectional, cohort, and case-control studies are all used to identify possible risk factors. Cross-sectional studies are also used to determine the prevalence of a condition. Cohort studies are used to study incidence, the natural history of a condition, prognosis after a specific exposure, and associated harms. Nonrandomized controlled trials are sometimes used when randomization is impossible or unethical.

Class IV

Evidence-based guidelines are systematically developed recommendations for clinical practice. Evidence-based guidelines identify the methodology used to gather the evidence on which the recommendations are based. Usually, a grading system for both the quality of the evidence and the strength of the recommendations is provided. Guidelines that are evidence-based may also contain consensus recommendations in areas where evidence is lacking, but these recommendations are clearly identified and appropriately graded.

Class V

Class V references may be the best information in the absence of other evidence. Expert opinion, panel consensus, literature reviews, and descriptive studies (case reports or case series) are subject to significant bias. A case series with comparison to historical controls can be plagued with missing data, and data extraction inconsistencies are common. The use of historical controls does not address how the diagnosis of disease or its treatment has evolved over time with newer technologies or medication. Textbook information may be out of date by the time the book is published.

Comparative Effectiveness Research (CER)

Citations are designated with the CER label as part of the evidence classification if the article cited is one of the following:

1. A clinical trial or other clinical study that directly compares two or more health care interventions for the same clinical scenario.
2. A systematic review that compares two or more health care interventions by synthesizing the research from previous clinical studies.


Aliot et al. EHRA/HRS Expert Consensus on Catheter Ablation of Ventricular Arrhythmias: developed in a partnership with the European Heart Rhythm Association (EHRA), a Registered Branch of the European Society of Cardiology (ESC), and the Heart Rhythm Society (HRS): in collaboration with the American College of Cardiology (ACC) and the American Heart Association (AHA). Europace 2009. 11(6):771-817. (V)


American College of Radiology (ACR). ACR Appropriateness Criteria Asymptomatic Patient at Risk for Coronary Artery Disease. Reston (VA): American College of Radiology; 2013. (IV)


Birnie et al. HRS expert consensus statement on the diagnosis and management of arrhythmias associated with cardiac sarcoidosis. Heart Rhythm 2014. 11(7):1305-23. (V)


Brignole et al. 2013 ESC Guidelines on cardiac pacing and cardiac resynchronization therapy: the Task Force on cardiac pacing and resynchronization therapy of the European Society of Cardiology (ESC). Developed in collaboration with the European Heart Rhythm Association (EHRA). Eur Heart J 2013. 34(29):2281-329. (IV)


Carver et al. Longer-term follow-up of patients recruited to the REACT (Rescue Angioplasty Versus Conservative Treatment or Repeat Thrombolysis) trial. J Am Coll Cardiol 2009. 54(2):118-26. (III CER)


Daubert et al. Prevention of disease progression by cardiac resynchronization therapy in patients with asymptomatic or mildly symptomatic left ventricular dysfunction: insights from the European cohort of the REVERSE (Resynchronization Reverses Remodeling in Systolic Left Ventricular Dysfunction) trial. J Am Coll Cardiol 2009. 54(20):1837-1846. (II CER)


Fihn et al. 2012 ACCF/AHA/ACP/AATS/PCNA/SCAI/STS guideline for the diagnosis and management of patients with stable ischemic heart disease: a report of the American College of Cardiology Foundation/American Heart Association task force on practice guidelines, and


Kirchhof et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. Europace 2016. 18(11):1609-78. (IV)


Kutyifa et al. The Influence of Left Ventricular Ejection Fraction on the Effectiveness of Cardiac Resynchronization Therapy: MADIT-CRT (Multicenter Automatic Defibrillator Implantation Trial With Cardiac Resynchronization Therapy). J Am Coll Cardiol 2013. 61(9):936-44. (III CER)


Linde et al. Randomized trial of cardiac resynchronization in mildly symptomatic heart failure patients and in asymptomatic patients with left ventricular dysfunction and previous heart failure symptoms. J Am Coll Cardiol 2008. 52(23):1834-43. (II)


Makati et al. Equivalent arrhythmic risk in patients recently diagnosed with dilated cardiomyopathy compared with patients diagnosed for 9 months or more. Heart Rhythm 2006. 3(4):397-403. (III)


Pedersen et al. EHRA/HRS/APHRS expert consensus on ventricular arrhythmias. Europace 2014. 16(9):1257-83. (V)


Pokushalov et al. Progression of atrial fibrillation after a failed initial ablation procedure in patients with paroxysmal atrial fibrillation: a randomized comparison of drug therapy versus reablation. Circ Arrhythm Electrophysiol 2013. 6(4):754-60. (III CER)

Ponikowski P. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC). Developed with the special contribution of the Heart Failure Association (HFA) of the ESC. Eur J Heart Fail 2016. (IV)


Priori et al. 2015 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death: The Task Force for the Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death of the European Society of Cardiology (ESC). Endorsed by: Association for European Paediatric and Congenital Cardiology (AEPC). Eur Heart J 2015. 36(41):2793-867. (IV)


Proust et al. Long-term prognosis of patients diagnosed with Brugada syndrome: Results from the FINGER Brugada Syndrome Registry. Circulation 2010. 121(5):635-643. (III)


Serruyts et al. Improved safety and reduction in stent thrombosis associated with biodegradable polymer-based biolimus-eluting stents versus durable polymer-based sirolimus-eluting stents in patients with coronary artery disease: final 5-year report of the LEADERS (Limus Eluted From A Durable Versus ERodable Stent Coating) randomized, noninferiority trial. JACC Cardiovasc Interv 2013. 6(8):777-89. (II CER)


Stable et al. Cardiac resynchronization therapy: a review of CRT-D versus CRT-P. Future Cardiol 2009. 5(6):567-572. (V)


Strickberger et al. AHA/ACCF Scientific Statement on the evaluation of syncope: from the American Heart Association Councils on Clinical Cardiology, Cardiovascular Nursing, Cardiovascular Disease in the Young, and Stroke, and the Quality of Care and Outcomes Research Interdisciplinary Working Group; and the American College of Cardiology Foundation: in collaboration with the Heart Rhythm Society: endorsed by the American Autonomic Society. Circulation 2006. 113(2):316-327. (V)


Young et al. Combined Cardiac Resynchronization and Implantable Cardioversion Defibrillation in Advanced Chronic Heart Failure: The MIRACLE ICD Trial. JAMA 2003. 289(20):2685-2694. (II CER)


