

Appendix 1: Levels of evidence and classification of recommendations*

| | Class (size) of treatment effect; nature of recommendation and evidence* | | | |
|---|---|---|---|--|
| Estimate of certainty (level of evidence) | Class I: Benefit >>> risk | Class IIa: Benefit >> risk | Class IIb: Benefit ≥ risk: | Class III: No benefit OR Class III: Harm |
| Description of class | Procedure or treatment <i>should</i> be performed or administered | Additional studies with focused objectives are needed; it is <i>reasonable</i> to perform the procedure or administer the treatment | Additional studies with broad objectives are needed, and additional registry data would be helpful; procedure or treatment <i>may be considered</i> | Procedure or treatment <i>should not</i> be performed or administered because <i>it is not helpful and may be harmful</i> |
| Level A evidence: Multiple populations evaluated; data derived from multiple RCTs or meta-analyses | <ul style="list-style-type: none"> • Recommendation that procedure or treatment is useful or effective • Sufficient evidence from multiple randomized trials or meta-analyses | <ul style="list-style-type: none"> • Recommendation in favour of treatment or procedure being useful or effective • Some conflicting evidence from multiple randomized trials or meta-analyses | <ul style="list-style-type: none"> • Usefulness or efficacy of recommendation is less well established • Greater conflicting evidence from multiple randomized trials or meta-analyses | <ul style="list-style-type: none"> • Recommendation that procedure or treatment is not useful or effective and may be harmful • Sufficient evidence from multiple randomized trials or meta-analyses |
| Level B evidence: Limited populations evaluated; data derived from a single randomized trial or nonrandomized studies | <ul style="list-style-type: none"> • Recommendation that procedure or treatment is useful or effective • Evidence from single randomized trial or nonrandomized studies | <ul style="list-style-type: none"> • Recommendation in favour of treatment or procedure being useful or effective • Some conflicting evidence from single randomized trial or nonrandomized studies | <ul style="list-style-type: none"> • Usefulness or efficacy of recommendation is less well established • Greater conflicting evidence from single randomized trial or nonrandomized studies | <ul style="list-style-type: none"> • Recommendation that procedure or treatment is not useful or effective and may be harmful • Evidence from single randomized trial or nonrandomized studies |
| Level C evidence: Very limited populations evaluated; only consensus opinion of experts, case studies or standard of care | <ul style="list-style-type: none"> • Recommendation that procedure or treatment is useful or effective • Only expert opinion, case studies or standard of care | <ul style="list-style-type: none"> • Recommendation in favour of treatment or procedure being useful or effective • Only diverging expert opinion, case studies or standard of care | <ul style="list-style-type: none"> • Usefulness or efficacy of recommendation is less well established • Only diverging expert opinion, case studies or standard of care | <ul style="list-style-type: none"> • Recommendation that procedure or treatment is not useful or effective and may be harmful • Only expert opinion, case studies or standard of care |

Note: RCT = randomized controlled trials.

*Adapted, with permission, from Jacobs AK, Kushner FG, Ettinger SM, et al. ACCF/AHA clinical practice guideline methodology summit report: a report of the American College of Cardiology foundation/American Heart Association Task Force on Practice Guidelines. *Journal of the American College of Cardiology* 2013;61:213-65. www.sciencedirect.com/science/journal/07351097). © American College of Cardiology Foundation and American Heart Association.