

Diagnostic left heart catheterization

CD 7.3.2, 7.3.3, 7.3.4, 7.3.5

Medical specialty organization guidelines recommend guideline directed medical therapy as the cornerstone of management of chronic coronary artery disease. These recommendations are based on a large body of evidence; including multiple large randomized controlled clinical trials (COURAGE, ISCHEMIA, and BARI-2D), and meta-analyses that demonstrate a significant improvement in angina symptoms, and cardiac events with guideline directed medical therapy. These trials further demonstrate that there is no improvement in survival or cardiac events with routine revascularization compared to guideline directed medical therapy^{1, 2, 8}.

Management options for coronary artery disease should account for the risks of invasive coronary angiography weighed against the benefits. Invasive coronary angiography is associated with cardiac (e.g. coronary artery injury and myocardial infarction) and extra-cardiac (e.g. vascular access site bleeding, ischemic stroke, and contrast-mediated acute kidney injury) risks. Invasive coronary angiography should be utilized as the treatment option when there is a favorable benefit-to-risk assessment¹⁰.

Based on medical specialty organization guidelines^{3, 5, 10} and Appropriate Use Criteria^{4, 9}, indications for invasive coronary angiography include the following:

- Angina despite guideline directed medical therapy
- Angina with high-risk findings on stress testing
- New left ventricular systolic dysfunction or heart failure of suspected ischemic etiology
- Known coronary artery disease with prior revascularization with recurrent angina
- Prior to non-coronary cardiac surgery, major vascular surgery, or organ transplant

References

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