



# Effective Health Care

## Renal Artery Stenosis

### Nomination Summary Document

#### Results of Topic Selection Process & Next Steps

- The topic, *Renal Artery Stenosis*, will go forward as an update to or expansion of an existing comparative effectiveness or effectiveness review.
  - Balk EM, Raman G. Comparative Effectiveness of Management Strategies for Renal Artery Stenosis: 2007 Update. Comparative Effectiveness Review No. 5 Update. (Prepared by Tufts-New England Medical Center under Contract No. 290-02-0022.) Rockville, MD: Agency for Healthcare Research and Quality. November 2007.

#### Topic Description

- Key Questions:**
1. For patients with atherosclerotic renal artery stenosis in the modern management era (i.e., since JNC-5 in 1993), what is the evidence on the effects of aggressive medical therapy (i.e., antihypertensive, antiplatelet, and antilipid treatment) compared to renal artery angioplasty with stent placement on long-term clinical outcomes (at least 6 months), including blood pressure control, preservation of kidney function, flash pulmonary edema, other cardiovascular events, and survival?
    - a. What are the patient characteristics, including etiology, predominant clinical presentation, and severity of stenosis, in the studies?
    - b. What adverse events and complications have been associated with aggressive medical therapy or renal artery angioplasty with stent placement?
  2. What clinical, imaging, laboratory, and anatomic characteristics are associated with improved or worse outcomes when treating with either aggressive medical therapy alone or renal artery angioplasty with stent placement?
  3. What treatment variables are associated with improved or worse outcomes of renal artery angioplasty with stent placement, including periprocedural medications, type of stent, use of distal protection devices, or other adjunct techniques?

#### Considerations

- An assessment of the last comparative effectiveness review conducted by AHRQ on this topic indicated that findings concerning some of the key questions (KQs 1 and 2) are possibly out of date. During the assessment, experts in the field were consulted and suggested that upcoming findings from CORAL and RADAR trials would have an impact on this topic.

- Results from the CORAL Trial are now available at <http://www.nejm.org/doi/full/10.1056/NEJMoa1310753>
  - The CORAL trial was designed to test whether renal-artery stenting, when added to protocol-driven contemporary medical therapy, improves clinical outcomes in persons with atherosclerotic renal-artery stenosis.
  - The investigators “found no benefit of stenting with respect to the rate of the composite primary end point or any of its individual components, including death from cardiovascular or renal causes, stroke, myocardial infarction, congestive heart failure, progressive renal insufficiency, and the need for renal-replacement therapy.”
- Now that the results from the CORAL trial are available, an update to the AHRQ comparative effectiveness review, which incorporates findings from this trial, is warranted.