

# Sample Published Abstracts

## Value of Radiology Projects

### Cost-effectiveness of Elective Endovascular Aneurysm Repair Versus Open Surgical Repair of Abdominal Aortic Aneurysms<sup>1</sup>

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#### **PURPOSE:**

The aim of this study was to estimate the lifetime cost-effectiveness of endovascular aneurysm repair (EVAR) versus open surgical repair (OSR) in the Netherlands, based on recently published literature.

#### **METHODS:**

A model was developed to simulate a cohort of individuals (age 72 years, 87% men) with an abdominal aortic aneurysm (AAA) diameter of at least 5.5 cm and considered fit for both repairs. The model consisted of two sub-models that estimated the lifetime cost-effectiveness of EVAR versus OSR: (1) a decision tree for the first 30 post-operative days; and (2) a Markov model for the period thereafter (31 days-30 years).

#### **RESULTS:**

In the base case analysis, EVAR was slightly more effective (4.704 vs. 4.669 quality adjusted life years) and less expensive (€24,483 vs. €25,595) than OSR. Improved effectiveness occurs because EVAR can reduce 30 day mortality risk, as well as the risk of events following the procedure, while lower costs are primarily due to a reduction in length of hospital stay. The cost-effectiveness of EVAR is highly dependent on the price of the EVAR device and the reduction in hospital stay, complications, and 30 day mortality.

#### **CONCLUSION:**

EVAR and OSR can be considered equally effective, while EVAR can be cost saving compared with OSR. EVAR can therefore be considered as a cost-effective solution for patients with AAAs.

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<sup>1</sup> Eur J Vasc Endovasc Surg. 2016 Jul;52(1):29-40. doi: 10.1016/j.ejvs.2016.03.001. Epub 2016 Apr 23

Interventional radiology delivers high-value health care and is an Imaging 3.0 vanguard.<sup>2</sup>

Charalel RA1, McGinty G2, Brant-Zawadzki M3, Goodwin SC4, Khilnani NM1, Matsumoto AH5, Min RJ1, Soares GM6, Cook PS7.

#### PURPOSE:

To review major contributions made by interventional radiology to the American College of Radiology's Imaging 3.0 program, in light of the demand that health care and imaging costs be reduced while enhancing value to patients and payers.

#### METHODS:

Uses a review of published literature about interventional procedures and outcomes to emphasize the added value of IR procedures, along with their impact on patient care and the cost of delivering that care. Explores specific IR examples to demonstrate enhanced patient care and associated cost-savings.

#### RESULTS

Technological advancements in IR have added value to the health care system through innovation and the provision of alternative and effective minimally invasive treatments, which have decreased morbidity, mortality, and overall cost. Moreover, because IR is traditionally practiced in cohesive, patient-centered care teams, interventional radiologists have an enhanced ability to provide clinically-relevant information and time-critical recommendations. In some cases, patients are directly seeking out interventional radiologists for consultation, treatment, and longitudinal care, based on their demonstrated value for the care and treatment of particular conditions, including systematic uterine leiomyomas, end-stage liver disease, and unresectable hepatocellular carcinoma.

#### CONCLUSION

Interventional radiology has achieved Imaging 3.0 readiness ahead of other radiologic subspecialties, because many IR practices are engaged in the kind of integrated healthcare delivery that enhances patient care while driving cost-savings. All radiologists can learn from the example of their IR colleagues to engage patients, routinely deliver prompt results, and to improve patients' understanding of their condition.

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<sup>2</sup> Adapted from: J Am Coll Radiol. 2015 May;12(5):501-6. doi: 10.1016/j.jacr.2014.10.024. Epub 2014 Nov 1.