DO ALL SPECT APPROPRIATENESS CRITERIA PREDICT LONG-TERM CLINICAL OUTCOMES? A 3-YEAR FOLLOW-UP STUDY

Oral Contributions
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Background: SPECT Appropriateness Criteria (AC) has been established for quality of care since 2005. Our prior study (JACC 2013;61:10S) showed AC predictive power in 1 year follow-up. This study sought to evaluate the effectiveness of appropriate (A) vs. inappropriate (I) AC to predict MACE in 3-year follow-up.

Methods: All pts with SPECT over 12 months in 2008 were included. Out-pt visits were retrospectively evaluated prior to SPECT referral using 2009 AC to determine A, I, and uncertain (U). MACE was followed for 3 years.

Results: Of 65,922 consecutive pts, 924 had SPECT. MACE (n=81, 8.7%) was higher in A compared to I (HR 1.82, p=.0051). Predictive A criteria were: A-30: New/worsening symptoms with abnormal prior imaging (2.4%, OR 3.12, p=0.03), and A-55: Symptomatic pts post PCI or CABG (13.5%, OR 2.83, p<0.01). However, A-43: Preop with ≥ 1 risk factor and <4 METS had a low MACE (4.1%, OR 0.27, p=0.19). In contrast, relative high MACE was seen in I-13: Intermediate CHD risk (2.7%, OR 1.47, p=0.58), I-27: Asymptomatic, known CAD, prior stress test < 2 years (3.7%, OR 0.63, p=0.53), and I-59: Asymptomatic pts < 2 years after PCI/CABG (3.9%, OR 1.80, p=0.24). Based on MACE, 4 ACs were reclassified: A-43 to I; I-13, I-27, and I-59 to U. Reclassification resulted in significant delineation of MACE in A and I (HR 2.88, p=.0006).

Conclusion: Reclassifying some ACs may increase effectiveness of outcome predictions. Further research on AC is warranted on clinical outcomes before AC is widely applied to clinical settings.