

비용효과 성능을 고려한 관동맥질환의 진단

Diagnosis of Coronary Artery Disease Based on Cost - effectiveness Analysis

28

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Abstract

Diagnostic strategies for coronary artery disease are diverse and include exercise EKG to coronary angiography, myocardial SPECT to coronary angiography, dobutamine or exercise echocardiography to coronary angiography, and direct coronary angiography. Cost - effectiveness analysis can be performed considering that the cost should include the costs of the diagnostic tests themselves, the cost of not - diagnosing the patients, the final test costs on false positive patients, and the cost to treat complications and that the effect should include quality - adjusted life year (QALY) with the fraction of proper diagnosis influenced by the diagnostic performance of the initial non - invasive tests. Based on the prior cost - effectiveness analysis, the pre - test likelihood affected most of the cost - effectiveness of a diagnostic strategy. Direct angiography was most cost - effective when the pre - test likelihood was high (>60%), while SPECT with or without a prior exercise EKG to angiography was most cost - effective when the pre - test likelihood was intermediate or low. Compared to stress echocardiography, stress myocardial SPECT was more cost - effective when the likelihood was moderate or high. While the prognostic significance of negative (including false - negative) cases was important to maintain cost - effectiveness of a strategy, myocardial SPECT to coronary angiography was the most cost - effective method to diagnose coronary artery disease.

Keywords : Cost - effectiveness; Coronary artery disease;
Myocardial SPECT; Stress echocardiography; Exercise EKG
; ; SPECT; ;

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가 가 가

가 가 .

100%, 100% . ,

68%,

77%

18% . SPECT

85% 87% . SPECT

가 18%

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가 ,

가 9%

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가 .

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SPECT

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가 가

가 가

가

가 가?

가?

가 가 .

가 , / SPECT(single photon emission computed tomography),

가

$(1, 2).$

가

가

30

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60

가

가

,

가

가

2%,

0.15%

2.5%

가,

가),

2%

ST - T

가 가

가

가

가

0 ~ 100%

SPECT

1%

0.5%,

0.5%

가

80 ~ 90%

가

20,000 ,

SPECT

가

10%

300,000 (\$300),

120,000 (\$120),

가

1,200,000 (\$1,200)

가 1%

10,000,000 (\$10,000)

가?

1/4

J Nucl Cardiol

1

 $\frac{1}{4}$

SPECT

가

가

QALY(Quality adjuste life year ;)

QALY 가

QALY가

QALY가 가 가 가

가 QALY

가,

가 QALY

가

가 QALY

가 QALY

가 QALY

가 QALY

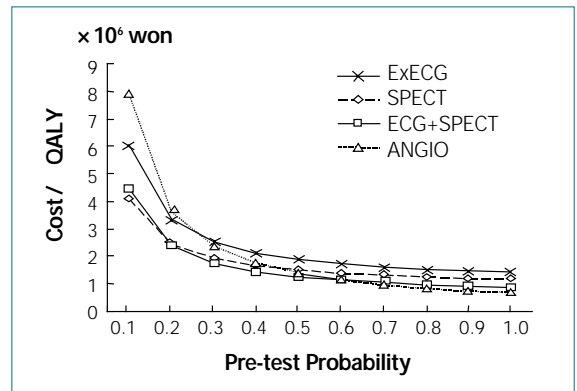
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1. SPECT 가

QALY. ExECG

SPECT , SPECT

SPECT , ECG + SPECT

SPECT , ANGIO

Pre - test Probability /

30%가 가 . 0.3

QALY 가 1

100~800 (

34 : 213).

Patterson (3) 가

(1, 2)

가 QALY

가 QALY

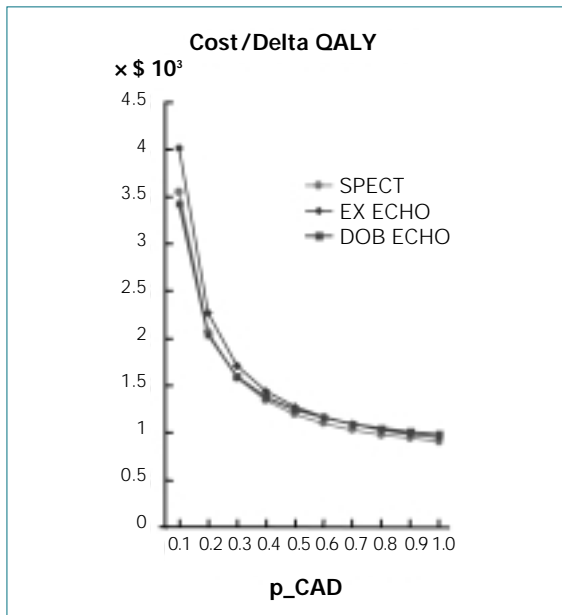
가 (1).

가 10% 60%

4

가

가 가 (1).
가 가
가
(1, 3)
,
가
가 (1). 가
가
(18%) (68%)가
가
15% 가
가 , 가
가 가
가 가
가 가
SPECT
3% 가 가 . SPECT 가
가
가 가 0.5% (4)
SPECT
. 1%
가 (20~60%) SPECT . 1%
(1).
SPECT SPECT ,
SPECT
, 가 60% 가
가 가



2. SPECT 가
 ' QALY. SPECT SPECT
 , EX ECHO
 , DOB
 ECHO
 . p_CAD
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 가 . 0.3 30%가
 . QALY
 가 1 1,000~4,000
 (J Nucl Cardiol 9 :
 518).

가
SPECT
(2).
가
가 .
SPECT

가

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