

Diagnostics Imaging Strategies for Patients with Stable Chest Pain and
Intermediate Risk of Coronary Artery Disease: Comparative Effectiveness
Research of Existing Technologies:



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Cost-Effectiveness and Cost-Utility

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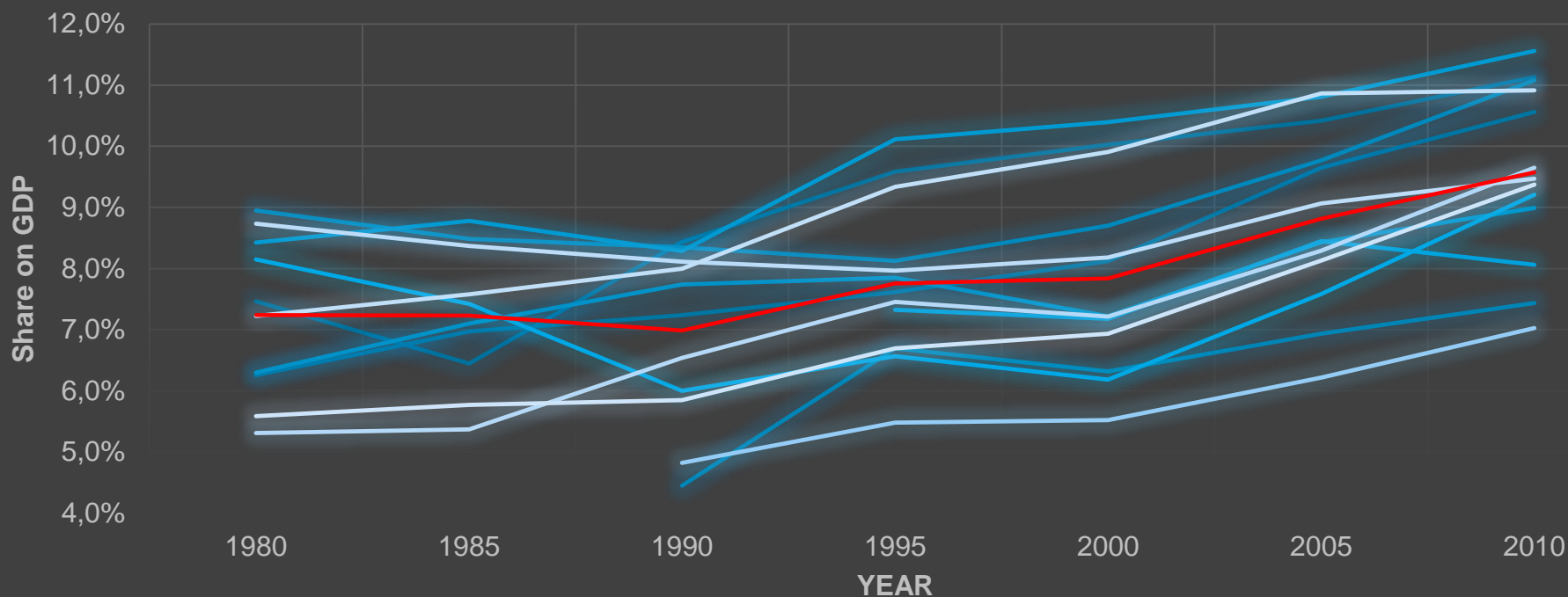


Outline

- Reasons for Health Economics
- Economic Analyses in DISCHARGE
- Collection of data
- Decision Tree model
- Interpretation of results
- First Data

Health care expenditures

Share of health care expenditures in gross domestic product



Reasons for economic analyses

- Decisions in healthcare are (also) economically driven
- Rational allocation of resources to be preferred over limitation

Economic analysis in DISCHARGE

Our goal is to calculate, whether CTA or ICA is the more cost-effective diagnostic test in consideration of all costs.

General Information

- Perspective
 - » Health care provider
 - » Patient
 - » Society
- Time frame
 - » Duration study
 - » 2-4 years
- Distinction between cardiac and non-cardiac findings

Costs included

- regular treatments
- adverse events major adverse cardiac events (AE/MACE)
- additional costs induced by adverse events
 - » during diagnostic test/treatment
 - » during follow-up

Collection of data I

- public databases
 - » data about health care system
 - » reimbursement rates
 - » prices for drugs
- study centers
 - » equipment and personnel time

Collection of data II

- patients

- » AE/MACE

- » diagnostic tests

- » treatments

- » hospitalization

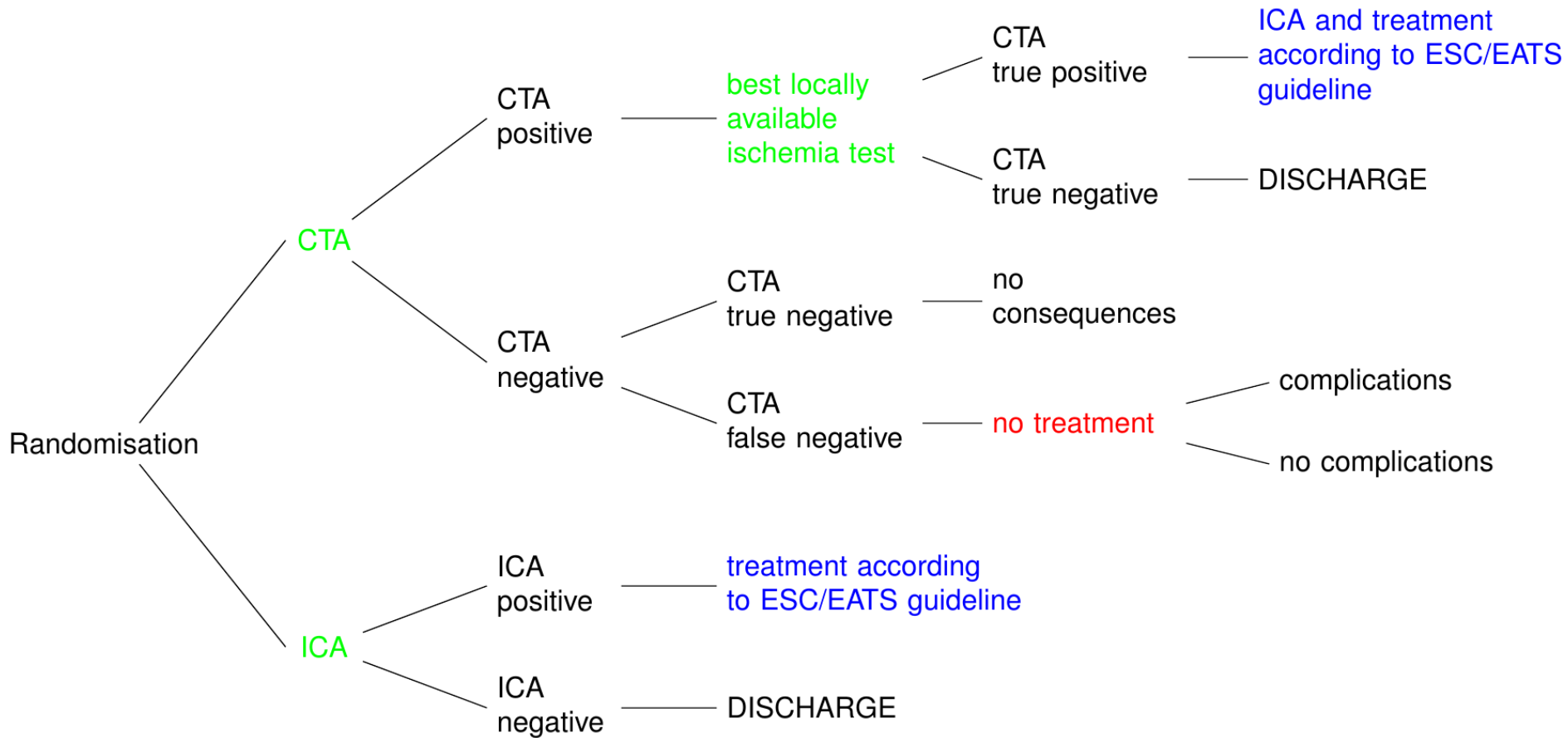
- » rehabilitation

- » ambulant care

- » out-of-pocket
payments

- » days off from work

CE Decision Tree



ICER

Costs per MACE avoided by using CTA
instead of ICA

$$ICER_{CTA/ICA} = \frac{Costs_{CTA} - Costs_{ICA}}{p_{MACE_{ICA}} - p_{MACE_{CTA}}}$$

Cost-utility analysis

Cost per QALY, gained by diagnosed
CAD (*QALY*)

$$CU_{CTA/ICA} = \frac{Costs_{CTA/ICA}}{QALY_{CTA/ICA}}$$

ICUR

Incremental cost-utility analysis for comparison between CTA and ICA

$$ICUR_{CTA/ICA} = \frac{Costs_{CTA} - Costs_{ICA}}{QALY_{CTA} - QALY_{ICA}}$$

Sources of First Results

- 4 Centers have finished pilot study
 - » P14 Lithuania
 - » P16 Portugal
 - » P17 Romania
 - » P19 Spain

Status from: Feb., 6th

Baseline Data

- 240 Patients included
- Gender
 - » Male: 48.3%
 - » Female: 51.7%
- Age
 - » Average: 61 yrs
 - » Range: 35 yrs – 86 yrs

First Results I

- Additional diagnostic tests
 - » Resting 12-lead ECG 97.1%
 - » Exercise ECG 36.3%
 - » Rest Echo 68.8%
 - » Stress Perfusion MRI 1.3%
 - » Stress Wall-Motion MRI 0.4%

First Results II

- Average Duration
 - » CTA: 00:23 hours
 - » ICA: 00:41 hours
- Average Length of Stay
 - » CTA: 3.6 days
 - » ICA: 5.6 days

Summary

- Perspectives
 - » Health care provider
 - » patient
 - » Society
- Results calculated
 - » Cost-effectiveness analysis
 - » Cost-utility analysis
- Costs considered
 - » diagnostic tests
 - » treatments
 - » consequences of adverse events
- Average Duration
 - » CTA: 00:23h
 - » ICA: 00:41h

Questions?

Possible answers:

» Maybe

» I will look this up

» Please refer to my colleague [...]

Thank you...

...very much for listening.

For further information, please refer to

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