

Perspective from the American Association of Physicists in Medicine (AAPM)



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Radboudumc



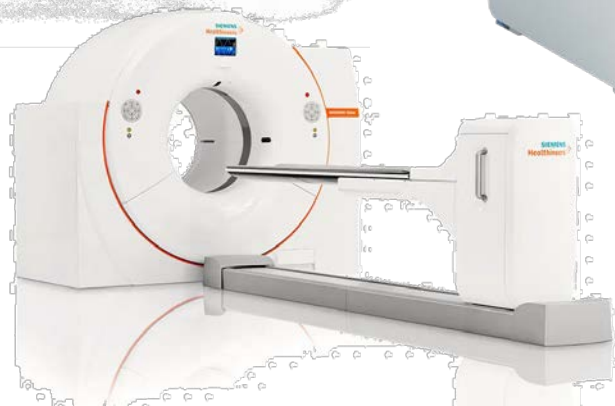
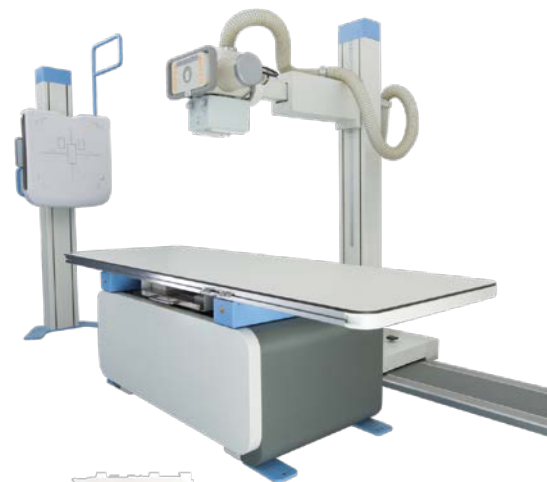
**UNIVERSITY
OF TWENTE.** | **TECHMED
CENTRE**



A balance scale is shown against a black background. The left pan is higher and contains the word 'RISK' in white, block letters. The right pan is lower and contains the word 'BENEFIT' in white, block letters. The scale is made of metal pans and wooden beams, suspended by silver chains.

RISK

BENEFIT

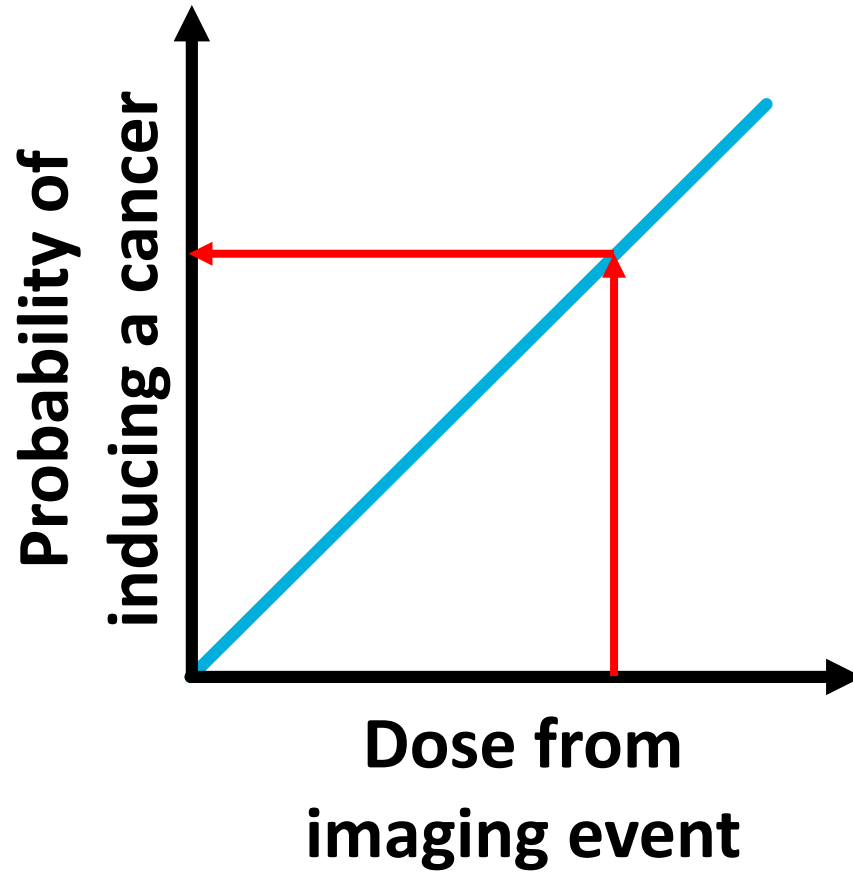


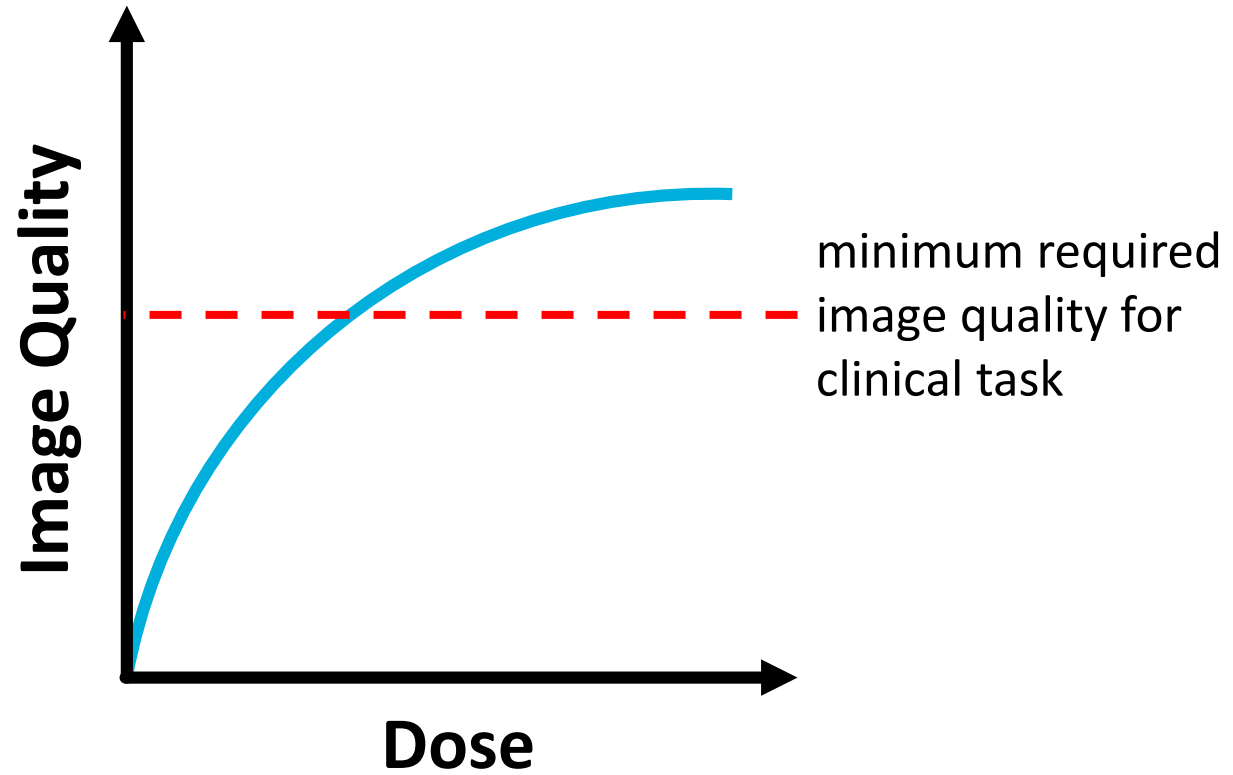
**history of dose from
prior imaging exams
is not relevant**

Deterministic

Stochastic







Optimization

AAPM Position Statement 13-B

“...medical imaging should be used when clinically appropriate....[and] performed using the lowest radiation dose necessary to accomplish the clinical task....”







1st CT



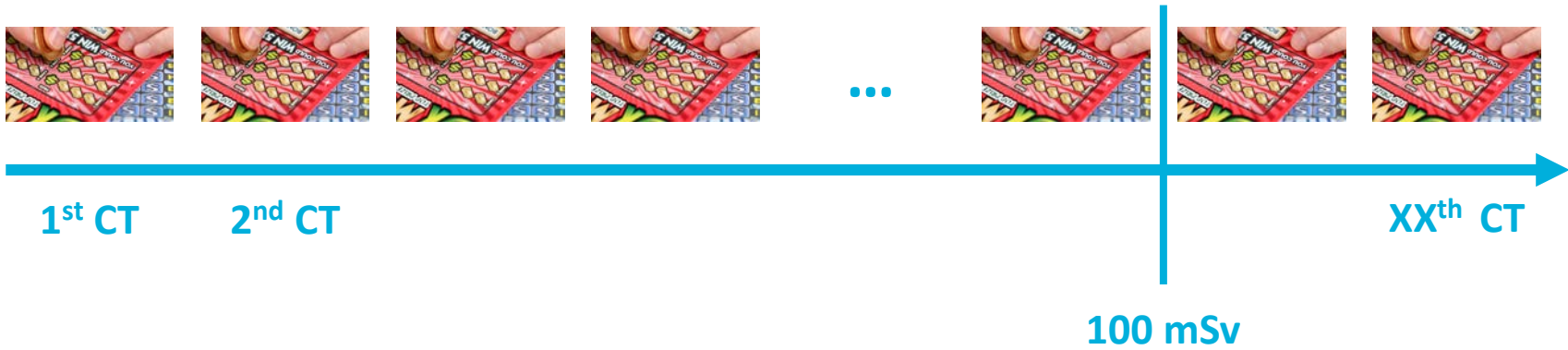
2nd CT



...



20th CT





A balance scale is shown against a black background. The left pan is higher and contains the word 'RISK' in white, block letters. The right pan is lower and contains the word 'BENEFIT' in white, block letters. The scale is suspended by silver chains. The pans are made of metal and have a wooden beam across the top.

RISK

BENEFIT



A balance scale is shown against a black background. The left pan is higher and contains the word 'RISK' in white, block letters. The right pan is lower and contains the word 'BENEFIT' in white, block letters. Both pans are made of metal and have a wooden beam resting on top. They are suspended by silver-colored metal chains.

RISK

BENEFIT



The graphic features a dark teal background. In the center, there is a faint, glowing blue image of a human figure with arms outstretched, similar to Leonardo da Vinci's Vitruvian Man, overlaid on a circular arc. The text "2021 ACR" is at the top, followed by "Appropriateness" and "Criteria®" which are underlined.

2021 ACR Appropriateness Criteria®

Variant 1:**Neurogenic thoracic outlet syndrome. Initial imaging and follow-up imaging after surgery or intervention.**

Procedure	Appropriateness Category	Relative Radiation Level
MRI chest without and with IV contrast	Usually Appropriate	○
MRI chest without IV contrast	Usually Appropriate	○
Radiography chest	Usually Appropriate	⊕
CT chest with IV contrast	May Be Appropriate	⊕⊕⊕
CTA chest with IV contrast	May Be Appropriate	⊕⊕⊕
US duplex Doppler subclavian artery and vein	May Be Appropriate	○
CT chest without and with IV contrast	Usually Not Appropriate	⊕⊕⊕
CT chest without IV contrast	Usually Not Appropriate	⊕⊕⊕
CTU chest with IV contrast	Usually Not Appropriate	⊕⊕⊕

Variant 2:**Occupational exposure, suspected interstitial lung disease. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
CT chest without IV contrast	Usually Appropriate	☢☢☢
Radiography chest	Usually Appropriate	☢
CT chest with IV contrast	Usually Not Appropriate	☢☢☢
CT chest without and with IV contrast	Usually Not Appropriate	☢☢☢
MRI chest without and with IV contrast	Usually Not Appropriate	○
MRI chest without IV contrast	Usually Not Appropriate	○
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☢☢☢☢

Appropriate dose records

Aggregated records

Quality control

Optimization

Research

AAPM/ACR/HPS Position Statement 35-A

“...the decision to perform a medical imaging exam should be based on clinical grounds, including the information available from prior imaging results, and not on the dose from prior imaging-related radiation exposures....”



AAPM/ACR/HPS Position Statement 35-A

Frequently Asked Questions

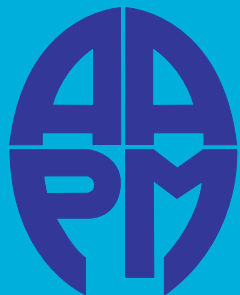
Target Audience: Healthcare Professionals

- 1. The facility where I work uses a dose management software program to collect and analyze information from imaging exams. Why should we not use this software program?**

Over the past decade, many medical imaging facilities have adopted dose management software programs to collect and analyze information from imaging exams. Dose metrics reported by the imaging software programs are used to monitor and optimize patient dose.



Thank you!



Statement



FAQ



Radboudumc



LRCB

dutch expert centre
for screening



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