

**Ist eine Szintigrafie/PET in
Anbetracht der Strahlenbelastung
und der biol. verträglicheren
Stressechokardiographie und MRI
noch indiziert?**

Thomas Leitha

Donauspital Wien, Vorst. d. Abtlg. f. nuklearned. Diagnostik und Therapie

Ist eine Szintigrafie/PET in
Anbetracht der Strahlenbelastung
und der biol. verträglicheren
Stressechokardiographie und MRI
noch indiziert?

The

Wrong question

Donat... nuk... med. Diagnostik und Therapie

Sind Strahlen das EINZIGE RISIKO?



U.S. Food and Drug Administration



U.S. Department
of Health and
Human Services

FOR IMMEDIATE RELEASE

P07-90

May 23, 2007

FDA News

Media Inquiries:

Karen Riley, 301-827-6242

Consumer Inquiries:

888-INFO-FDA

FDA Requests Boxed Warning for Contrast Agents Used to Improve MRI Images

U.S. FDA to alert doctors about imaging drugs' risks

REUTERS  WASHINGTON (Reuters), Oct 9

HEALTH INFORMATION

WASHINGTON (Reuters), Oct 9 - U.S. regulators will soon alert doctors about reports of deaths and serious reactions following the use of certain imaging agents to help diagnose heart problems, Food and Drug Administration (FDA) officials said on Monday. The contrast agents, Bristol-Myers Squibb Co's Definity and General Electric Co's Optison, are used in echocardiography. The FDA has been investigating reports of deaths and serious cardiopulmonary reactions after people were injected with either of the products.

10/9/2007

RADIATION PROTECTION

INDIKATION

LOKALE EXPERTISE

PROGNOSE

Und vergessen Sie Gy und Sv !!!

STRAHLENEXPOSITION

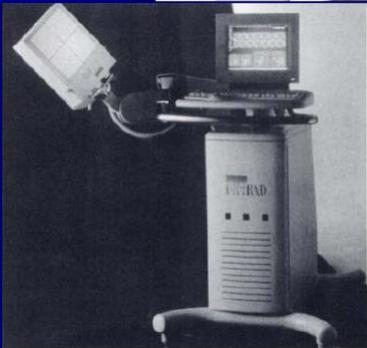
TI-201 (110 MBq)	23,2 mSv
Stress Tc-99m (740 MBq)	6,3 mSv
Stress/Rest Tc-99m (1200 MBq)	10,3 mSv
+ Gd-153 (4 GBq total) Transmission:	0,11 mSv
+ low dose CT:	0,9 -0,36 mSv

A.J. Einstein

Circulation. 2007;116:1290-1305

- **99mTc** agents preferred when possible in SPECT
- Consider **stress-first/stress-only** protocol for patients with low pretest
- **Probability** of stress perfusion defect
- *Minimize activity (mCi) to that needed to obtain good image quality with high degree of confidence*
- *Consider lower activity (mCi) in smaller patients*
- For CT attenuation correction, minimize tube current
- Hydrate after imaging and encourage early micturition

MESSTECHNIK



z.B.: XACT Digirad

- Triple-head system solid-state detectors 27" (69 cm) FOV detector arc
- Low dose volume CT transmission-based (AC) 160 kVp and 2.0 mA ($\sim 5 \mu\text{Sv}$)

Digirad 2020/c Imager (FDA June 1997)

Myokardszintigraphie: Hohe Strahlenbelastung durch Mehrfachtests

- New York – US-Mediziner warnen vor der Strahlenbelastung durch die Myokardszintigraphie, die bereits 10 Prozent der Gesamtexposition ausmache. Studie in **JAMA (2010; 304: 2137-2144)** deckt auf, dass nicht wenige Patienten mehrfach untersucht werden.

RADIATION PROTECTION

INDIKATION
LOKALE EXPERTISE
PROGNOSE
METHODOLOGIE
LOGISIK

Und vergessen Sie Gy und Sv !!!