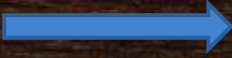


Gebelikte görüntüleme problemleri

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Ankara Numune Eğitim ve Araştırma
Hastanesi Acil Tıp Kliniği Başasistanı

- Akut ve kronik durumların tanısında !!!
- Gebelik ve laktasyonda güvenlik? ?  Gereksiz endişe
- Risk  tanının konulamaması/kötü prognostik seyir

- Gebelik
 - 2-15. haftaları → kritik
 - <2 hafta → ya hep ya hiç kuralı
- Risk $\propto$ İyonizan radyasyon dozu
 - >5 rads (<50 mGy)
 - Maruziyet → [X-ray/gama tarafından üretilen iyon]n/kg/hava (**R**)
 - Absorbe edilen doz → enerji/kg/kütle (**rad/Gray**)
 - Eşdeğer doz → Vücutta toplanan enerji (**rem/Sv**)

TABLE 99-8 Teratogenic Radiation Effects

Gestational Age	Effect of 5–10 rads (50–100 mGy)	Effect of >10 rads (>100 mGy)
0–2 wk	Probably none	Possible spontaneous abortion
3–8 wk	Unknown; probably none detectable	Possible malformations with increasing dose
9–15 wk	Unknown; probably none detectable	Possible mental development defects with increasing dose
≥16 wk	None	None detectable or none

TABLE 99-9 Radiation Exposure to the Uterus/Fetus

Procedure	Dosage in mGy
Threshold for human teratogenesis	100
Accepted as safe in pregnancy	50
Abdominal/pelvis CT	25–35
CT, kidney-ureter-bladder protocol (reduced radiation dose)	10
Lumbosacral spine series (three view)	1.6–3.5
Ventilation-perfusion scan (total)	2.1
Abdominal series (two view)	2
Lung perfusion scan with technetium	1.7
Normal background radiation over 9 months	1
Head CT	<0.5
Lung ventilation scan with xenon	0.4
Anteroposterior pelvis x-ray	0.4
Chest CT (10-mm slices, 10 slices), for standard or pulmonary embolism protocol	0.2
Cerebral angiography	0.1
Mammography—diagnostic for suspected breast cancer	0.07–0.2
Chest radiography (two view) with shielding of the maternal abdomen	<0.001
Cervical spine (two view)	<0.001

Note: 1 rad = 10 mGy = 10 mSv.

USG

- Akustik çıkış seviyesi → ALARA
- Uzaysal pik zamansal ortalama → max 720 mV/cm²
- Akustik hasar γ doku ısınması

MRG

- >>> USG
- Kontrast kullanımı
 - Gadaliniumlu
 - Superparamagnetik demiroksit

X-ray

- α gestasyonel yaş/radyasyon dozu
- Büyüme geriliği/mikrosefali/zeka geriliği
- Karsinogenez??

Nükleer tıp

- Tag-ging
- Technetium99m /radyoaktif iyot

BT

- Materyal yarar $\longleftrightarrow$ fetal zarar
- Doz α teknik
- V/P<<< BT<<< MRG
- Oral kontrast >> IV kontrast

- **Guidelines for Diagnostic Imaging During Pregnancy and Lactation**
 - (The American College of Obstetricians and Gynecologists)/
American College of Radiology
- **Tintinalli's Emergency Medicine: A Comprehensive Study Guide, 8th edition (Internal Medicine) 8th Edition**