

# **Radioprotection of the Patients**

## **Moving to an Electronic Era**

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**Member of the Executive Board**



**International Society of Radiology**

# About ISR

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- **Confederation of about 80 National Societies, including the European Society of Radiology and the Inter American College of Radiology**

**Started in 1925 and established in 1953**

- **Parent organization of ICRP and ICRU**
- **NGO status in IAEA and WHO**
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# International Society of Radiology

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World-wide ISR societies



**Leading International organization  
representing Radiologist specialists**



# Main achievements

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- Educational efforts (with WHO)
  - Center of Excellence in Nairobi  
Cameroon – Tanzania – Fiji
- Monographs for education
- Global Study group for the education of diagnostic radiologists

# CT Examinations

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**Huge increase of the number of CT examinations,  
Recently and in the future**

**→ 87 millions of CT in 2008 in US**

**→ Increase by 10-15% per year since 2000**

**High level of variability of exposure**

**Low level of justification**

**25% to 40% of examinations would be not justified**

# Pediatric CT

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- High variability in the rate of utilization
- High variability in the rate of dose exposure

↑ Training                      ↑ Evidence based practice  
↑ Guidance level              ↑ Awareness

# Imaging by non specialists

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- **Operating Room imaging**
  - **Low level of training**
- **Self referral (orthopedists, cardiologists, etc...)**

**↑ Of non justified tests**

# Referral guidelines

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- **ACR appropriateness**
- **Royal College of Radiology and  
Société Française de Radiologie**
- **European Society of Radiology / EC**

**Global Approach**



# Moving to an Electronic Era

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- **From guidelines to Evidence Based Practice**
  - **Embedded guidelines into an electronic system for examination requesting**

**Clinical Decision Support**

- **↓ Non justified examinations**
- **Reporting / Physician / Disease / Institution**

# Moving to an Electronic Era

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- **Technical**      **DICOM and IHE**
  - Automatic recording of the dose exposure
- **Patient**      **Electronic Patient Record**
  - Automatic storage of the dose
- **Population**      **National Data center**
  - Benchmarking, Epidemiological Studies  
International comparison

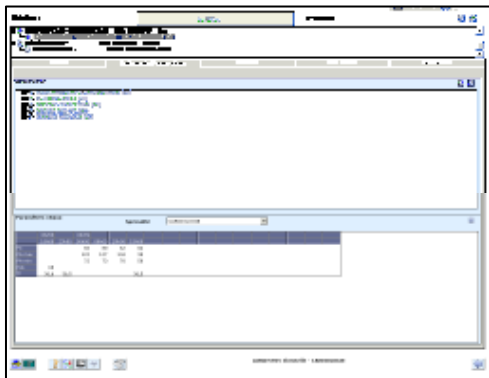


CT

Report



EPR



Data Center



# Summary

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- **Development of guidance levels for diagnostic imaging tests**
- **CDS with embedded referral guidelines**
- **Automatic recording and storage of the dose**
- **Action with industry for optimization of the imaging devices**