



# 3rd European IRPA Congress

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[www.irpa2010europe.com](http://www.irpa2010europe.com)

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## Towards safer and more effective use of radiation in paediatric healthcare

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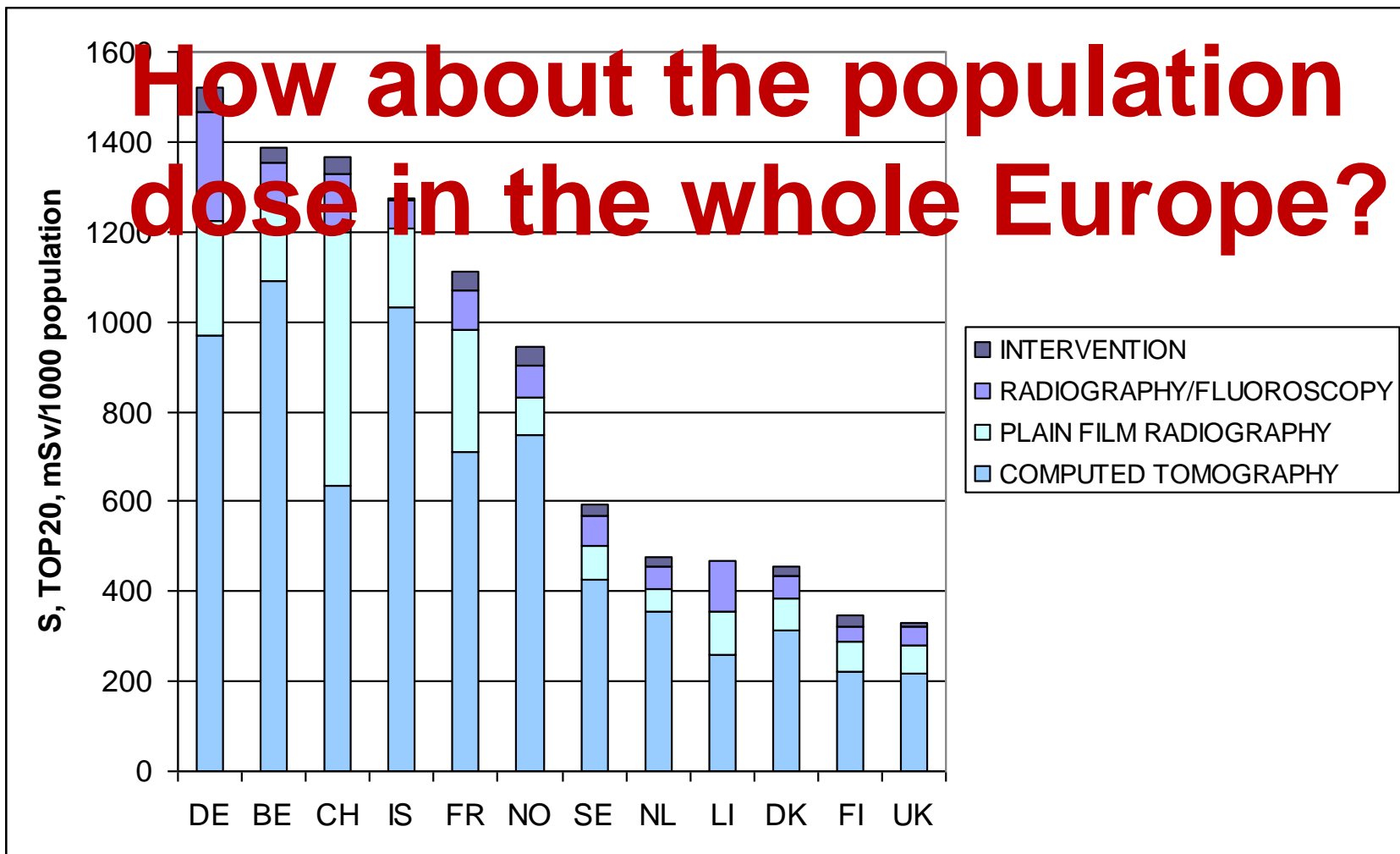
- **Higher vulnerability of children to ionizing radiation** (developing and growing tissues, longer life-span to express long-term radiation induced effect); scientific evidence on cancer risks exists but **further research is still needed**.
- **Optimization of protection** requires refining of parameters according to patient weight/size ("child-sizing" protocols). This **customizing procedures** means making a compromise between patient dose and acceptable noise in the image (especially in CT and PET/CT).

## Radiation protection in medical use of radiation

- **Clinical audit** is a way to monitor **justification**. The **implementation of referral guidelines** should be promoted.
- **Promotion of safety culture**; radiation protection should be part of **continued education** of referrers (physicians and dentists) as well as radiological practitioners. Multidisciplinary team (radiologist, nuclear medicine specialist, medical physicist, radiographer) should learn from each other.

# Collective effective dose from “TOP20” examinations of 12 European countries in 2008

## How about the population dose in the whole Europe?



Aroua A. et.al. Collective doses from medical exposures: an intercomparison of the “TOP20” radiological examinations based on EC guidelines RP 154; European IRPA 2010, Helsinki



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# STUDY ON EUROPEAN POPULATION DOSES FROM MEDICAL EXPOSURE (DOSE DATAMED 2, DDM2)

ENER/10/NUCL/SI2.581237

28 December 2010 – 27 March 2013

[www.ddmed.eu](http://www.ddmed.eu)

Workshop on European Population Doses  
from Medical Exposure  
24-26 April 2012

**IRPA13 P02.09**



Funded by the



**European population dose per caput is 1 mSv**

# INTERNATIONAL POPULATION DOSES FROM RADIOLOGICAL PROCEDURES PER CAPUT

