



Workshop on European Population Doses from Medical Exposure
24-26 April 2012
National Hellenic Research Foundation, Athens, Greece



hosted by the
Greek Atomic Energy Commission



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Scientific programme

Tuesday, 24 April

08:00 - 17:00 Registration / poster mounting

09:00 - 09:10 Opening by:
Christos Housiadas, GAEC's Chairman
Ritva Bly, Project Leader

GENERAL INTRODUCTION TO POPULATION DOSE ESTIMATION *Chairperson: Hilde Olerud, Abbas Aroua*

09:10 - 09:30 Legal basis for population dose estimates and EC expectations from DDM2 [O.1]
Georgi Simeonov, European Commission

09:30 - 09:50 Introduction to population dose estimations in DDM2 [O.2]
Ritva Bly, Project leader

09:50 - 10:10 Data on medical exposures from a global point of view [O.3]
Ferid Shannoun, UNSCEAR

10:10 - 10:30 Coffee Break

METHODOLOGY FOR POPULATION DOSE ESTIMATES *Chairperson: Hannu Järvinen, Paul Stoop*

10:30 - 10:45 Categorization of X-ray examinations; TOP 20, 75 and 225 [O.4]
Hilde Olerud, NRPA

10:45 - 11:15 How to estimate typical effective doses for X-ray procedures? [O.5]
Paul Shrimpton, HPA

11:15 - 11:45 How to estimate typical effective doses for NM examinations (including PET-CT)? [O.6]
Bernard Aubert, IRSN

11:45 - 12:15 How to determine examination frequencies and population dose estimates for X-rays and NM? [O.7]
Jenia Vassileva, NCRPP

12:15 - 12:30 Break

STATUS OF EXAMINATION FREQUENCIES IN EUROPE

Chairperson: Andreas Jahnen, Virginia Tsapaki

12:30 - 12:50	Summary of the general data based on European questionnaires [O.8] <i>Abbas Aroua, IRA</i>
12:50 - 13:10	Summary of examination frequencies for X-ray procedures [O.9] <i>Elke Nekolla, BfS</i>
13:10 - 13:30	Summary of examination frequencies for NM procedures [O.10] <i>Anders Frank, SSM</i>
13:30 - 14:30	Lunch

STATUS OF POPULATION DOSES IN EUROPE

Chairperson: Ritva Bly, Renato Padovani

14:30 - 14:50	Summary of the population dose for X-ray procedures [O.11] <i>Hannu Jarvinen, STUK</i>
14:50 - 15:10	Summary of the population dose for NM procedures [O.12] <i>Paul Stoop, RIVM</i>
15:10 - 15:30	Problems in population dose estimations, X-ray and NM procedures [O.13] <i>Jenia Vassileva, NCRPP</i>
15:30 - 15:50	Discussion
15:50 - 16:10	Coffee Break

STATUS OF EUROPEAN POPULATION DOSE DATABASE AND GUIDANCE

Chairperson: Stavroula Vogiatzi, Elke Nekolla

16:10 - 16:30	European database for population dose registration and follow-up [O.14] <i>Andreas Jahnen, CRP-Henri Tudor</i>
16:30 - 16:50	Suggested need of improvements for the European Guidance (RP 154) [O.15] <i>Ritva Bly, STUK</i>
16:50 - 17:00	Discussion
17:45 - 20:00	Social program: Guided tour in the New Acropolis Museum

Wednesday, 25 April

08:30 - 17:00 Registration at National Hellenic Research Foundation

NATIONAL EXPERIENCES ON POPULATION DOSE ESTIMATION

Session 1 – X-ray and NM examinations

Chairperson: Ritva Bly, Anders Frank

09:00 - 09:15	Radiation dose of the Bulgarian population from X-ray and Nuclear Medicine examinations [O.16] <i>Simona Avramova-Cholakova, Bulgaria</i>
09:15 - 09:30	Frequency and collective dose for the Nuclear Medicine and the TOP 20 X-ray examinations in Portugal, 2011 [O.17] <i>Pedro Teles, Portugal</i>
09:30 - 09:45	Population dose assessment from x-ray and nuclear medicine examinations in Serbia [O.18] <i>Olivera Ciraj-Bjelac, Serbia</i>
09:45 - 10:00	Radiation exposure of the Italian population from diagnostic radiology and nuclear medicine examinations [O.19] <i>Gaetano Compagnone, Italy</i>
10:00 - 10:10	Break

NATIONAL EXPERIENCES ON POPULATION DOSE ESTIMATION

Session 2 – X-ray examinations

Chairperson: Hannu Järvinen, Bernard Aubert

10:10 - 10:25	Trends in examination frequency and population doses in Norway, 2002 - 2008 [O.20] <i>Hilde Olerud, Norway</i>
10:25 - 10:40	Patient Dose Evaluation and Experiences in Collection of Frequencies for X-ray Procedures [O.21] <i>Jonas Marcinkevicius, Lithuania</i>
10:40 - 10:55	Survey of population doses from selected X-ray examinations in Slovakia [O.22] <i>Dusan Salat, Slovakia</i>
10:55 - 11:15	Coffee break

NATIONAL EXPERIENCES ON POPULATION DOSE ESTIMATION

Session 3 –NM examinations

Chairperson: Hilde Olerud, Paul Stoop

11:15 - 11:30	Contribution of nuclear medicine to the exposure of the French population in 2007 [O.23] <i>Cecile Etard, France (presented by Bernard Aubert, France)</i>
11:30 - 11:45	The estimation of collective dose from medical exposures from diagnostic nuclear medicine examinations in Croatia [O.24] <i>Dario Faj, Croatia</i>
11:45 - 12:00	Dosages and use of different nuclides in diagnostic nuclear medicine imaging [O.25] <i>Ischa DeWaard, The Netherlands</i>
12:00 - 12:15	Population Collective Effective Dose from Nuclear Medicine Procedures in Greece [O.26] <i>Stavroula Vogiatzi, Greece</i>

NATIONAL EXPERIENCES ON POPULATION DOSE ESTIMATION

Session 4 – Frequency collection

Chairperson: Jenia Vassileva, Elke Nekolla

12:15 - 12:30	A survey on frequency of TOP20 radiological examinations in 2010 in the Republic of Macedonia [O.27] <i>Vesna Gershan, The Former Yugoslav Republic of Macedonia</i>
12:30 - 12:45	Hungarian experience in collection of frequency data for X-ray procedures [O.28] <i>Oliver Turak, Hungary</i>
12:45 - 13:00	Automation of the collection of the frequency of X-ray examinations: a pilot study [O.29] <i>Regis Le Coultre, Switzerland</i>
13:00 - 14:00	Lunch break

GLOBAL EXPERIENCES ON POPULATION DOSE ESTIMATION

Chairperson: Paul Shrimpton, Abbas Aroua

14:00 - 14:30	Population dose in the USA [Invited presentation] [O.30] <i>to be announced</i>
14:30 - 14:45	Australian per Caput Dose from Diagnostic Imaging and Nuclear Medicine [O.31] <i>Anthony Wallace, Australia</i>
14:45 - 15:00	A Comparison of classification methodologies of Health Care Levels used by UNSCEAR and WHO [O.32] <i>Ferid Shannoun, UNSCEAR</i>
15:00 - 15:20	Coffee break

SPECIAL TOPICS

Chairperson: Andreas Jahnen, Virginia Tsapaki

15:20 - 15:35	Impact of different interpretations within TOP 20 approach for population dose estimation [O.33] <i>Hannu Järvinen, Finland</i>
15:35 - 15:50	Initial survey results on the accuracy of dose data in the DICOM objects [O.34] <i>Renato Padovani, Italy</i>

15:50 - 16:05	Computed Tomography Doses in Nuclear Medicine [O.35] <i>Katja Merimaa, Finland</i>
16:05 - 16:20	Age and sex distribution of CT examinations in Poland [O.36] <i>Dariusz Kluszczynski, Poland</i>

POSTER SESSION

Chairperson: Hilde Olerud, Jenia Vassileva

16:20 - 16:40	Summary of posters
16:40 - 18:00	Time for poster watching
20:30	Social programme: Workshop Dinner

Thursday, 26 April

8:30-12:00 Registration at National Hellenic Research Foundation

NATIONAL DIAGNOSTIC REFERENCE LEVELS AND DOSE SURVEYS

Chairperson: Andreas Jahnen, Renato Padovani

09:00 - 09:20	Summary of national DRLs for x-ray procedures in Europe [O.37] <i>Hannu Järvinen, STUK</i>
09:20 - 09:40	Summary of national DRLs for NM procedures in Europe [O.38] <i>Stavroula Vogiatzi, GAEC</i>
09:40 - 09:55	National diagnostic reference levels for fluoroscopy-guided procedures in Gastroenterology, Urology and Pediatric Cardiology [O.39] <i>Eleni Theano Samara, Switzerland</i>
09:55 - 10:10	The study of patient doses in diagnostic radiology for establishment of national diagnostic reference levels [O.40] <i>Larysa Stadnyk, Ukraine</i>
10:10 - 10:25	Entrance surface dose for selected radiological procedures in Poland [O.41] <i>Piotr Pankowski, Poland</i>
10:25 - 10:40	Diagnostic reference levels in x-ray and nuclear medicine procedures in France: evolution of collected data and collection tools [O.42] <i>Patrice Roch, France</i>
10:40 - 10:55	Assessment of radiation dose to pediatric patients in computed tomography [O.43] <i>Abdelmoneim Sulieman, Sudan</i>
10:55 - 11:15	Coffee break

CONCLUSIONS

Chairperson: Hilde Olerud, Stavroula Vogiatzi

11:15 - 11:45	European population dose and database [O.44] <i>Ritva Bly, STUK</i>
11:45 - 12:15	Major recommendations for improving for the EU guidelines (RP 154) [O.45] <i>Hannu Järvinen, STUK</i> <i>General Discussion: Project staff at panel</i>
12:15 - 12:45	CLOSING REMARKS <i>Georgi Simeonov, EC</i>
12:45 - 13:00	<i>Stavroula Vogiatzi, GAEC, Local Organizing Committee</i> <i>Ritva Bly, STUK, Project leader</i>

ANNEX POSTER PRESENTATIONS

Experience in collecting and analyzes of the frequency of X-ray diagnostic investigations in Ukraine [P.1]
Stadnyk Larysa, Ukraine

System of collection of medical exposure data in the Russian Federation [P.2]
Zvonova Irina, Russian Federation

Trends in the choice of Xray, CT and MR over 20 years in Norwegian radiology for examinations of head and spine [P.3]
Olerud Hilde Merete, Norway

Patients radiation doses from x-ray examinations in Sudan [P.4]
Sulieman Abdelmoneim, Sudan

Population exposure from Radiological medical examinations in Chania General Hospital [P.5]
Seferlis Stavros, Greece

Dose estimation received by adults undergoing radiological examinations in St. Paul's District General Hospital branch - Panagia of Thessaloniki [P.6]
Vernadakis - Michailakis Pavlos, Greece

Dosimetric comparison of mammography systems with different target/filter combinations [P.7]
Salvara Katerina, Greece

Preliminar radioprotection analysis on IGRT and kV imaging in RT treatments. Dosimetry, radioprotection and image quality impact [P.8]
Mari Alberto, Italy

Patient doses during four common cardiac electrophysiology procedures [P.9]
Papageorgiou Evangelia, Greece

Evaluation of radiation exposure of patients undergoing percutaneous transhepatic biliary drainage with stent to the duodenum using two Monte Carlo methods [P.10]
Karavasilis Efstratios, Greece

Adult radiation doses from multi-detector CT exams: preliminary results from the first Italian SIRM survey [P.11]
Palorini Federica, Italy

Pilot Results of the National Survey on Radiation Dose in CT in The Netherlands [P.12]
Stoop Paul, Netherlands

Modern screening 256-slice CT colonography: weighing risks versus benefits [P.13]
Perisinakis Kostas, Greece

Assessment of the exposure of the Swiss population to computed tomography in 2008 [P.14]
Aroua Abbas, Switzerland

Establishment of Diagnostic Reference Levels for dental intraoral radiography in Greece [P.15]
Manousaridis Georgios, Greece

Preliminary Australian Diagnostic Reference Levels for Multi-Detector CT [P.16]
Wallace Anthony, Australia

Establishment of the Local Dose Reference Levels for Direct Digital Radiology protocols at the Nicosia General Hospital [P.17]
Christofides Stelios, Cyprus

Establishment of Local Dose Reference Levels for four CT protocols and size specific dose estimations at the Nicosia General Hospital [P.18]
Christofides Stelios, Cyprus

Pediatric Chest X-Ray Protocol optimization and establishment of Local Dose Reference Levels of different age groups at Arch. Makarios III pediatric hospital [P.19]
Christofides Stelios, Cyprus

Dosimetric considerations for combined chest-abdomen neonates' radiographs [P.20]
Hatziioannou Konstantinos, Greece

Verification of radiation doses calculations during paediatric barium meal and cystourethrography examinations using PCXMC 2.0 and MCNP5 Monte Carlo codes [P.21]
Dimitriadis Anastasios, Greece

Pediatric nuclear medicine in the Netherlands - Dosages and state of affairs in 2010 [P.22]
De Waard Ischa, Netherlands

Examination frequency and population dose from nuclear medicine (NM) examinations in Norway in 2008 [P.23]
Unhjem Jan Frede, Norway

Evaluation of patient doses related to the nuclear medicine investigations in the period 2005-2009, in Hungary [P.24]
Pellet Sandor, Hungary

Statistical review of administered dose to PET/CT patients at “Evangelismos” General Hospital and evaluation of the concordance with the EANM guidelines [P.25]

Samartzis Alexandros, Greece

“Radiophilia”: A Tragic Phenomenon in Diagnostic radiology [P.26]

Abdollahi Hamid, Iran

Recent technical advances and future perspectives concerning protection of Population and Biomedical Equipment against E/M Radiation Medical Exposure as described in relevant Industrial Property Documents [P.27]

Spyropoulos Basile, Greece

Variation of gene expression level arising from occupational exposures of medical radiation workers [P.28]

Bahreyni Toossi, Mohammad Taghi, Iran
