
Release of the nuclear medicine patient in Europe: from basics to a computational approach - A Joint EURADOS-EANM initiative



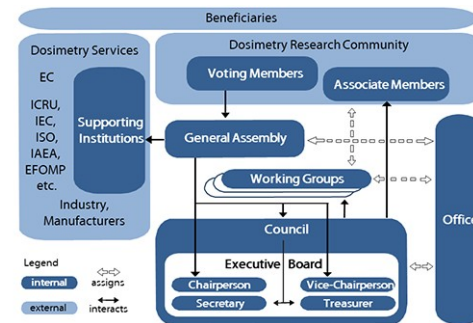
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Pilot Group Dosimetry in Nuclear Medicine

Federal Office for Radiation Protection (BfS)

EURADOS – European Radiation Dosimetry Group e. V.

- ❖ EURADOS e. V. is registered in the German Register of Societies as a non-profit association
- ❖ Composed by main bodies:
 - The General Assembly
 - The Executive Board
 - The Council
 - Working Groups which are composed of Associate Members
- ❖ EURADOS is a network of 83 European institutions (Voting Members) and more than 650 scientists (Associate Members)
- ❖ Financial resources - originate from sponsoring institutions, from Voting Members, Projects founded by EC, etc.
- ❖ EURADOS annual meetings, next AM2025 in Bucharest



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Pilot Group – Emergence and Tasks

- EURADOS Strategic Research Agenda from 2014 to 2020 on dosimetry for patients and staffs in nuclear medicine
- The proposal to set up a working group in nuclear medicine is initiated at the annual meeting in 2021
- Pilot group is established at the annual meeting in Belgrade in June 2022

Ongoing tasks:

- **The EURADOS-EANM joint project on external dose rate (Lara Struelens)**
- **AI in nuclear medicine imaging and dosimetry (Kuangyu Shi)**
- **Internal dosimetry intercomparison using different software (Juan Ocampo)**
- **I-131 compartmental model in hyperthyroidism therapy (Maria Carapinha)**
- **3D dosimetry in molecular imaging and targeted radionuclide therapy (Astrid Delker)**

Publications, Webinar, Projects and autumn meeting

- **Publications**

- EURADOS Report on FDG biokinetic modelling (DOI:10.12768/zz8y-xw93)
- Paper “Dose heterogeneity for alpha-emitters” *Rad Environ Biophys* (DOI:10.1007/s00411-022-01000-5)
- Paper “Dose heterogeneity and dose-response modelling for beta-emitters” *Z Med Phys* (DOI: 10.1016/j.zemedi.2023.02.006)
- Paper “Benchmarking computational dosimetry framework for external dose rates from NM patients” *EJNMMI Physics* (DOI: <https://doi.org/10.1186/s40658-024-00638-y>)
- Roadmap on Internal dosimetry of radiopharmaceutical therapy (jointly with WG7)
- Third position in ***TACTIC Grand Challenge of AAPM in 2023***

- **Pilot group works closely with EANM, EFOMP/SIG-FRID and ICRP**

- **Next pilot group meeting virtual (December 5, 2024)**

Agenda of the webinar

- **Introduction of EANM Radiation Protection Committee**
Jens Kurth, EANM, Vienna and University, Rostock
- **Legislative aspects of patient release in Europe, results from SimpleRad project**
Peter Covens, VUB, Brussels
- **Clinical experience and needs in radiopharmaceutical therapy**
Kristoff Muylle, AZ Delta, Roeselare & VUB / UZ Brussel
- **Computational approach to assess external dose rates from nuclear medicine patients**
Lara Struelens, SCK CEN, Mol
- **Q&A**

Thanks! Let's go to enjoy the webinar!