Radiation protection of patients in imaging and therapy

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Safety and Quality

Patient safety is the cornerstone of the high quality healthcare

Right and in-time diagnosis → Effective treatment → Improved health
Registrants and licensees shall ensure that:

- For **therapeutic radiological procedures**, the requirements of these Standards for calibration, dosimetry and quality assurance are fulfilled by or under the supervision of a medical physicist;

- For **diagnostic radiological procedures and image guided interventional procedures**, the requirements of these Standards for medical imaging, calibration, dosimetry and quality assurance are fulfilled by or under the oversight of or with the documented advise of a medical physicist whose degree of involvement is determined by the complexity of radiological procedures and the associated radiation risks
“Employers, registrants and licensees shall make special arrangements for: ...

- appropriate radiation protection in cases where a female patient is or might be pregnant or is breast-feeding.
- female workers, as necessary, for protection of the embryo or fetus and breastfed infants.”
International Day of Medical Physics
7 November 2017

Medical Physics: Providing a Holistic Approach to Women Patients and Women Staff Safety in Radiation Medicine
Statutory role of the IAEA

To establish standards of safety

To provide for the application of these standards

Safety Fundamentals
Safety Requirements
Safety Guides

Principles
“Shall”
“Should”
IAEA activities on radiation protection in medicine

Providing standards
- Safety standards

Providing guidance
- Safety reports
- Technical documents
- Public website

Providing training
- Training material
- Training courses
- E-learning
- Webinars
- Fellowships

Giving technical assistance
- Involve in projects
- Providing tools
- Direct advice
- Assessments, missions

Knowledge exchange
- Meetings, workshops
- Reporting system
- Public website
- Scientific publications

Building awareness
- Information campaigns
- Press campaigns
- Posters
International cooperation
RPOP website http://rpop.iaea.org

- **Current information for**
  - health professionals
  - patients
  - public

- **Access to**
  - different resources
  - news
  - latest events

> 800 000 visits / year
100 updates during 10 years
12 000 subscribers to the monthly newsletter

New design expected soon

RPOP survey to understand the user’s needs and improve RPOP
RPOP website http://rpop.iaea.org

- Information for protection of special groups
**Poster and leaflets**

Available in over 20 languages at https://rpop.iaea.org/
Building awareness in pregnancy

Available in 19 languages at https://rpop.iaea.org/

**Pregnant? or think you could be?**

Please tell the staff before an X-ray or nuclear medicine procedure.

**What you need to know**

Uniforms are more sensitive to radiation, so you need to be told when to remove your uniform.

**DO's and DON'Ts**

- Do not proceed with the procedure if it’s important for your health.
- Do ask if the medical staff will tell you what will be done to reduce any risks.
- Do ask advice before the procedure if you are concerned.

You are enceinte ou pensez l'être? Pensez à en informer le personnel avant un examen radiographique ou un acte de médecine nucléaire.

**Recommandations**

N’oubliez pas qu’un acte est important pour votre santé. Demandez conseil avant l’acte si vous avez des inquiétudes.

¿Está embarazada o cree que lo está? Esté en contacto con el personal médico.

**Recomendaciones**

Si necesita un test estable, esté en contacto con el personal médico.

**Плодитесь или предполагаете, что беременны?**

Просите сообщать об этом нашему сотруднику до начала радиологических процедур.

**Что вам необходимо знать**

Пледайте, чтобы вы были чувствительны к воздействию радиации.

**Рекомендации**

Если вы беременны или подозреваете, что беременны, обязательно позаботьтесь о безопасном подходе.

¿Está embarazada o cree que puede estarlo? Por favor, informe al personal médico antes de someterse a un acto radiográfico o a un procedimiento de medicina nuclear.

**Recomendaciones**

No deje de someterse al procedimiento que le es importante para su salud.

Prepárate al personal médico las medidas que se te tomarán para reducir el riesgo de embarazo.

Si está preocupada, pida consejos antes de someterse al procedimiento. Prepárate a la realización de un procedimiento de embarazo.
Training packages

• 6 packages in English, Spanish and Russian
• New: Radiation Protection in Dental Radiology jointly with WHO, WDF, IADMI, IOMP, Image Gently
Incident reporting and learning systems

- Anonymous
- Voluntary
- Learning from incidents

- SAFRAD
  Interventional procedures

- SAFRON
  Radiation therapy
E-learning

- Launched end 2016
- 2670 participants
- 890 certificates of completion
Free webinars

- on selected topics in radiation protection in medical uses of ionizing radiation
  - 14 webinars broadcasted: 12 in English and 2 in Spanish

  - Over 2300 participants from 90 MS
  - Recorded webinars available for viewing from: https://rpop.iaea.org/

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<td>Prof. Guy Friga and Prof. Luis Donoso-Bach</td>
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<td>Tips and tricks in CT</td>
<td>Prof. Guy Friga and Dr. Joanna Santos</td>
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<td>Prof. Kevin Hill</td>
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<td>Radiation exposure of the pregnant and breastfeeding patients in nuclear medicine</td>
<td>Assoc. Prof. Sigrid Leide-Seegborn</td>
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<td>Prof. John Damilakis</td>
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<td>Approaches to estimating radiation exposure to the lens of the eye during interventional procedures (SPANISH)</td>
<td>Prof. Eliseo Vano</td>
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<td>Radiation induced skin injuries in interventional procedures</td>
<td>Dr. Madan Rahani</td>
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<td>Approaches to estimating radiation exposure to the lens of the eye during interventional procedures</td>
<td>Prof. Eliseo Vano</td>
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<td>Is cataract a real risk to those working in interventional suites?</td>
<td>Dr. Madan Rahani</td>
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Objectives:

- Review developments since the 2012 Bonn conference, especially actions taken in line with the Bonn Call for Action by all relevant parties.
- Harmonize activities between international organizations and other stakeholders.
- Look ahead at new developments impacting on radiation protection in medicine.
International conference
11-15 December 2017

• 620 official nominations
• 70 invited speakers and session chairs/ rapporteurs
• 300 accepted abstracts for contributed papers

Program:
  • 8 Topical sessions
  • 4 Roundtables
  • 3 Lunchtime Breakout Sessions

International Conference on
RADIATION PROTECTION IN MEDICINE
Achieving Change in Practice
11–15 December 2017
Vienna, Austria
International conference
11-15 December 2017

Registration is still possible
No registration fee

We look forward to welcoming you in Vienna in December!