

## PROPOSAL FOR A NEW SPECIAL INTEREST GROUP (SIG)

<b>Name of SIG<sup>1</sup>:</b>	<b>Radionuclide Dosimetry</b>
<b>Parent Committee(s)<sup>2</sup>:</b>	<b>Scientific Committee (main)</b> Education and Training Committee Professional Matters Committee
<b>Keywords<sup>3</sup>:</b>	Targeted Radionuclide Therapy Molecular Radiotherapy Nuclear Medicine Dosimetry
<b>Rationale<sup>4</sup>:</b>	<p>Therapeutic applications of radiopharmaceuticals are developing rapidly<sup>1</sup>. They use a growing range of vectors (simple vector molecules, peptides, antibodies), medical devices (radiolabelled microspheres) and radioactive isotopes (beta, but also alpha or Auger). Due to this variety, the characterisation of the irradiation delivered to the patient is at the same time stimulating and challenging. Nevertheless, treatment planning and verification in nuclear medicine therapy, seldom performed in the past in radioiodine therapy for benign or malignant thyroid disease, is nowadays requested (implementation in national law of the Basic Safety Standard Council Directive EU 2013/59). Moreover, reliable absorbed dose calculations are facilitated by the technological and scientific developments of the last decades.</p> <p>The role of the medical physics expert (MPE) in nuclear medicine dosimetry is presented in EFOMP Policy Statement 16 (Caruana <i>et al.</i> 2018). However, the role of patient-specific dosimetry in therapeutic nuclear medicine is still, astonishingly, a matter of discussion (Chiesa <i>et al.</i> 2017, Giammarile <i>et al.</i> 2017, Flux <i>et al.</i> 2018), despite regulations.</p> <p>An increasing number of patients will benefit from treatment with radiotherapeutics, since therapeutic agents recently developed or in early phase trials are able to treat more common cancers, including liver colorectal metastases or prostate cancer. However, the availability of physicists able to implement clinical dosimetry is severely limited. Furthermore, the important shortage in medical physics resources within the European Union is more pronounced in nuclear medicine dosimetry. There is a need for networking, education, research and professional exchanges in radionuclide dosimetry.</p> <p>Chiesa C <i>et al.</i> Eur J Nucl Med Mol Imaging <b>44</b> (2017) 1783–1786  Caruana C <i>et al.</i> Phys Med <b>48</b> (2018) 162-168  Flux GD <i>et al.</i> Eur J Nucl Med Mol Imaging <b>45</b> 1 (2018) 152-154.  Giammarile F <i>et al.</i> Eur J Nucl Med Mol Imaging <b>44</b> 12 (2017) 2137-2139.</p>

<sup>1</sup> [http://www.eanm.org/content-eanm/uploads/documents/EANM\\_2017\\_iDTF-Report\\_online.pdf](http://www.eanm.org/content-eanm/uploads/documents/EANM_2017_iDTF-Report_online.pdf)

<p><b>Target audience<sup>5</sup>:</b></p>	<p>The objective of the SIG is to establish a network of medical physicists working in radionuclide dosimetry.</p>
<p><b>Expected outcome<sup>6</sup>:</b></p>	<ul style="list-style-type: none"> <li>- Structure medical physicists involved in radionuclide dosimetry, by promoting the existence and actions of the SIG in the EMP News.</li> <li>- Propose and deliver education in radionuclide dosimetry (both theoretical and practical).</li> <li>- Propose recommendations and codes of practice in radionuclide dosimetry, and publish via the European Journal of Medical Physics.</li> <li>- Participate to the elaboration of EFOMP recommendations and Policy Statements in the domain.</li> <li>- Participate to the identification of domains in radionuclide dosimetry that would benefit from research and structure at the European level.</li> <li>- Propose and organise scientific events (education, professional matters and research) within the ECMP.</li> <li>- Collaborate with other associations (AAPM, EANM, SNMMI) involved in radionuclide dosimetry with whom the EFOMP wishes to establish or already has Memoranda of Understanding.</li> <li>- Develop and disseminate expertise, and provide input to existing international bodies involved in the field (IAEA, ICRP, ICRU).</li> <li>- Provide a communication platform for members, allowing exchange of opinion &amp; data.</li> </ul>
<p><b>Coordination<sup>7</sup>:</b></p>	<p>A meeting of medical physicists was organised in October 6<sup>th</sup> 2020. Initially planned in Toulouse (France), it was eventually organised via GoToMeeting, with the support of the EFOMP. A group of 25 physicists from various European countries discussed a list of questions established collectively before the meeting. After the meeting, several participants (Annex 1) expressed their will to create a Special Interest Group on radionuclide dosimetry. It is anticipated that if the group is created and advertised within the EFOMP web site, the number is likely to grow rapidly from the current participation of 23 individuals from 9 countries.</p> <p>The main connexion within EFOMP is the Scientific Committee. However, due to the transversal nature of the proposed SIG, connexions with Professional matters, Education and training and European matters will be established.</p> <p>Connexions will be established with the AAPM, with groups or committees involved in radionuclide dosimetry within SNMMI or EANM.</p>

*This proposal form must be sent to the EFOMP parent committee chair.*



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**Annex 1: List of individuals interested in founding an EFOMP Special Interest Group on nuclear medicine dosimetry.**

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## Legend

- 1) **Name of SIG**
- 2) **Parent Committee(s)** - Relevant EFOMP Committee. If more than one parent committee is listed, the FIRST listed will be the official parent committee.
- 3) **Keywords** - include at least 3 keywords.
- 4) **Rationale** - What is the justification and need for the proposed SIG.
- 5) **Target audience** - e.g. Medical Physicists, Vendors.
- 6) **Expected outcome** - Description of the relevant results expected from the SIG.
- 7) **Collaborations** - Specify if there should be a coordination or collaboration with other EFOMP Committees, WGs, SIGs and/or scientific organisations.