


Marco D'Arienzo

MEDICAL PHYSICIST N. 3692 · PH. D. · QUALIFIED RADIATION PROTECTION EXPERT, III^o LEVEL, N.510

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Updated to: October 26, 2022

Profile

Name and surname	Marco D'Arienzo
Birthplace and date of birth	
Marital status	Married
Fiscal code	
Mail address	marco.dariento@unicamillus.org , marco.dariento@aslroma6.it
Certified Mail address	marco.dariento77@pec.it
Web	https://sites.google.com/site/marcodariento77/
Language skills	English (<i>highly proficient in spoken and written</i>), Spanish (<i>good working knowledge</i>)

Bibliometric indicators

Citazioni	1847
H-index	22
i10-index	32
Fonte: Google Scholar	Aggiornato al: October 26, 2022

Education

Roma Tre University of Rome UNIVERSITY DEGREE IN MEDICAL PHYSICS • Graduation mark: 110/110	<i>Rome, Italy</i> 29 January 2003
Tor Vergata University of Rome POST GRADUATE SPECIALIZATION SCHOOL IN NUCLEAR PHYSICS • Graduation mark: 70/70 with honors	<i>Rome, Italy</i> 26 July 2006
La Sapienza University of Rome PH.D. IN MEDICAL PHYSICS • Graduation mark: Excellent with honors	<i>Rome, Italy</i> 7 April 2016
Tor Vergata University of Rome INTERNATIONAL MASTER COURSE IN "PROTECTION AGAINST CBRNE EVENTS" • Department of Industrial Engineering and School of Medicine and Surgery	<i>Rome, Italy</i> 22 March 2019

Professional registration

Radiation Protection Expert MINISTRY OF LABOUR • Professional Register number n°510	<i>Rome, Italy</i> 20 January 2006
Medical Physicist PROFESSIONAL ORDER OF CHEMISTS AND PHYSICISTS • Professional Register number n°3692	<i>Rome, Italy</i> 24 January 2019

National Scientific Qualification - Associate Professor

SECTOR FIS/07, APPLIED PHYSICS

- Professional Register number n°510

Rome, Italy

From 12/09/2018 to 12/09/2024

Radiation Protection Expert Approval Certificate by Republic of Malta

CERTIFICATE N. A2254010-01

- Radiation Protection Commission

Sorbonne Center, Mosta - Malta

28 aprile 2022

Current position

Medical Physics Unit, ASL Roma 6

Ospedale dei Castelli, Via Nettunense,
Km 11,500 Ariccia, RM

MEDICAL PHYSICIST - PERMANENT POSITION. RADIATION PROTECTION EXPERT PURSUANT TO THE PROVISIONS OF THE ITALIAN LEGISLATIVE DECREE 101/2020. JOB ASSIGNMENT ART. 18, LETT. D CCNL 19.12.2019

Periodo 16.2020 - Present

- My role of medical physicist within ASL Roma 6 involves quality and safety activities, which include performing acceptance testing, conducting periodic evaluation of imaging modalities for regulatory and accreditation compliance, and providing patient dose estimations. The main fields of expertise are
 - Radiology. The main activities in radiology are developing QA/QC protocols in the context of radiation-related technologies, dose verification, diagnostic image optimization, dose reduction, data management and analysis.
 - Nuclear Medicine. The main activities in nuclear medicine are dosimetry, assurance of the safe use of radiation and appropriate handling of unsealed radioactive sources, developing QA/QC protocols.
 - Radiation protection. The main role in this field is the development and administration of the radiation safety program, including: compliance with all regulating and certifying agencies, administration of a personnel radiation monitoring program, calculation of shielding required for new or renovated treatment/diagnostic rooms, administration of radioactive-source storage and handling facilities.

Radiation Protection Expert

Sundry employers

PRIVATE CONSULTANT

Period 09.2018 - Present

- Radiation Protection Expert for the following employers:
 - Consorzio RFX.** Radiation Protection Expert for two Neutral Beam Injectors (SPIDER e MITICA)
 - IML, International Medical for Life.** Radiation Protection Expert for diagnostic mobile units.
 - Corendon Airline.** Radiation Protection Expert for air crew exposed to cosmic radiation.
 - Amethyst Italia.** Radiation Protection Expert in radiotherapy
 - Terna Rete Italia.** Radiation Protection Expert
 - BetaGlue Technologies.** Scientific Advisor

Adjunct Professor at - Unicamillus International University of Health and Medical Sciences

UniCamillus - Saint Camillus
International University of Health and
Medical Sciences

PROFESSOR FIS/07 Master degree in Medicine and Surgery E Degree in Radiology, Diagnostic Imaging and Radiotherapy Techniques

05.2022 - Presente

- Courses: Radiation Protection, Applied Physics

Past professional experience

ENEA Casaccia Research Center, National Institute of ionizing Radiation

Via Anguillarese 301, 00123 Roma

Metrology

SENIOR RESEARCHER WITH PERMANENT POSITION - THERAPY LEVEL PRIMARY STANDARD SECTION OFFICER

Period 05.2010 - Present

- Officer of the *therapy level primary standard section* at the National Institute of ionizing Radiation Metrology (FSN-INMRI). At present I'm involved in the development of therapy level national standards relating to the ionizing radiation quantities. I'm scientific coordinator for ENEA of the MRTDosimetry (Metrology for clinical implementation of dosimetry in molecular radiotherapy) EMPIR project: http://mrtdosimetry-empir.eu/?page_id=14
- The ENEA National Institute of Ionizing Radiation Metrology (ENEA-INMRI) is responsible for developing and providing the Italian national standards relating to the ionizing radiation quantities. The main lines of activity at ENEA-INMRI are related to the following sectors: I) absorbed dose standards II) air kerma standards III) radionuclide and neutron standards IV) quality system service.
- In this context I also gained experience in calibration of instruments used in the measurement of ionizing radiation for medical, industrial and radiation protection purposes. Specifically:
 - improving the procedures for practical dosimetry at therapy and protection levels
 - supporting the implementation of radiotherapy dosimetry protocols used by the national radiotherapy centres in the framework of their Quality System programmes
- My current research interests lie in different areas:
 - Development of high-dose primary standards
 - Dosimetry in external beam radiation therapy
 - Dosimetry in brachytherapy
 - Dosimetry in molecular radionuclide therapy
 - Molecular radiation therapy
 - Radiobiology
 - Radiation protection

Sant'Andrea Hospital, Medical Physics Department

Via di Grottarossa, 1035, 00189 Rome

MEDICAL PHYSICIST *Temporary position*

Period 06.2008 - 05.2010

- Appointment of medical physicist both for the nuclear medicine and radiation oncology department. in Nuclear Medicine:
- Field of expertise in nuclear medicine:
 - Surveillance over the safe delivery of radionuclides, Internal dosimetry, radionuclide targeted therapy, molecular radioterapy, liver radioembolization therapy, tumor therapy, medical imaging.
 - Assessment of tumor and organ doses following targeted therapy in nuclear medicine. Specifically, I implemented working protocols for the following radionuclide therapy procedures: treatment of thyroid diseases with ¹³¹I, treatment of liver metastases with radioactive ⁹⁰Y microspheres, treatment of non Hodgkin lymphoma with ⁹⁰Y-Zevalin.
- Field of expertise in radiation therapy:
 - personnel and workplace monitoring, planning of radiation therapy treatments, radiobiology, tumor therapy, medical devices, measurement and Instrumentation.

San Pietro Hospital, Medical Physics Department

Via Cassia, 600, 00189 Rome

MEDICAL PHYSICIST *Temporary position*

Period 01.2007 - 05.2008

- Radiation Oncology Department: personnel and workplace monitoring, planning of radiation therapy treatments, radiobiology, tumor therapy, medical devices, measurement and Instrumentation. *Technology used:* TPS Eclipse, Varian 2100 e Varian 600 Accelerators.

RFX Consortium

Corso Stati Uniti, 4 - 35127 Padua

SENIOR RESEARCHER, RADIATION PROTECTION EXPERT *Temporary position*

Period 05.2004 - 05.2010

- I was responsible for the radiation safety and all radiation protection activities of the PRIMA facilities. PRIMA (Padova Research Injector Megavolt Accelerated) is the name of the ITER Neutral Beam Injector currently under construction in Padua (Italy). PRIMA consists of two facilities named respectively SPIDER (Source for Production of Ion of Deuterium Extracted from RF Plasma), which represents the ion source, and MITICA (Megavolt ITER Injector Concept Advanced), the main system.
- During the past years I carried out different studies concerning the main safety issues related to radiation protection of workers. Among these:
 - Tritium production and diffusion from the MITICA facilities
 - Assessment of radiation dose rate resulting from activated corrosion products in the PRIMA facility cooling loops
 - Analysis of the possible external exposure and internal contamination following radiological accidents
 - Development and implementation of a radiation protection programme: workplace radiation monitoring and personnel dose assessment
 - Arrangement of the necessary documentation required for the licensing of both injectors
 - Classification of controlled or supervised areas
 - Writing and editing of technical reports

Sincrotrone Trieste S.C.p.A.

Strada Statale 14 - km 163,5, Trieste

SENIOR RESEARCHER *Temporary position*

Period 01.2006 - 01.2007

- Responsible of experimental activity on a femtosecond Ti:sapphire laser (<https://www.elettra.trieste.it/>)

ENEA Frascati research center, UTAPRAD-SOR technical unit

Via Enrico Fermi 45 – 00044 Frascati,

Rome

RESEARCHER *Temporary position*

Period 04.2003 - 04.2004

- During this period I was mainly involved in modelling the interaction of THz (100 GHz - 20 THz) electromagnetic fields with biological systems and tissues.

ENEA Frascati research center, UTAPRAD-SOR technical unit

Via Enrico Fermi 45 – 00044 Frascati,

Rome

GRADUATION THESIS *Physics university course*

Period 06.2001 - 01.2003

- During this period I was mainly involved in modelling the interaction of THz (100 GHz - 20 THz) electromagnetic fields with biological systems and tissues. In particular irradiation of a number of biological samples was performed (blood, lysosomes) with the aim to investigate the possible genotoxic effect of THz radiation with the irradiated samples

DESY, Deutsches Elektronen-Synchrotron

Notkestraße 85, 22607 Hamburg,

Germany

SUMMER STUDENT

Period 06.2001 - 09.2001

- During this period I was mainly involved in the development of a software dedicated to the management and control of high-voltages of the H1 particle detector (www.desy.de)

Patents

Compositions, devices and kits for selective internal radiation therapy

Submitted by: BetaGlue Technologies

S.p.A, Verona (IT)

PCT/IB2020/060247

31/10/2020

Inventor, application PCT/IB2020/060247

Scientific responsibility of EU projects

Metrology for clinical implementation of dosimetry in molecular radiotherapy, MRTDosimetry

EMPIR

SCIENTIFIC RESPONSIBILITY FOR ENEA OF THE EMPIR-EU PROJECT MRTDOSIMETRY

2016 - 2019

- The overall aim of the project is to provide the metrology for the clinical implementation of absorbed dose calculations in MRT. The project brings together expertise in metrology and nuclear medicine research in order to address the problem of determining the radiation dose to individual patients who are undergoing molecular radiotherapy (MRT). The project began on 1 June 2016 and ran for three years, finishing on 31 May 2019. Further information: <http://mrt-dosimetry-empir.eu/>

Metrology for Molecular Radiotherapy, MetroMRT

EURAMET

SCIENTIFIC RESPONSIBILITY FOR ENEA OF THE EURAMET-EU PROJECT METROMRT (GRANT N° 217257)

2012 - 2015

- The main focus of the project was to develop the background metrology to support routine individual MRT patient dosimetry. Together with a programme of dissemination the project worked with the clinical community to achieve widespread implementation. The outcomes from the project aimed to enable patient-specific treatment planning in MRT practice. The project is now finalised. It began on 1 June 2012 and ran for three years, finishing on 31 May 2015. Further information: <http://projects.npl.co.uk/metromrt/>

Teaching experience

ACADEMIC APPOINTMENTS

Radiation Protection, Applied Physics

Roma

UniCamillus - Saint Camillus International University of Health and Medical Sciences

2021-present

Master degree in Medicine and Surgery E Degree in Radiology, Diagnostic Imaging and Radiotherapy Techniques

Radiation protection issues related to X-ray radiology devices

Rome

Tor Vergata University of Rome

January 2022

Master di II livello in Agenti Fisici e Radioprotezione

Didactic Board

Rome

Tor Vergata University of Rome

2021-2022

International Master Course in Protection against CBRNE events, I level *Protection from CBRNe events* and II level in *Protection from CBRNe events*, Department of Industrial Engineering and Faculty of Medicine and Surgery, Tor Vergata University of Rome

Nuclear Medicine Dosimetry	<i>Rome</i>
<i>La Sapienza University of Rome</i>	2021-2022
Postgraduate Specialization in <i>Nuclear Medicine</i> , Faculty of Medicine and Psychology	
Nuclear Medicine Dosimetry	<i>Rome</i>
<i>La Sapienza University of Rome</i>	2020-2021
Postgraduate Specialization in <i>Nuclear Medicine</i> , Faculty of Medicine and Psychology	
Radiation protection issues related to X-ray radiology devices	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	January 2021
Master di II livello in Agenti Fisici e Radioprotezione	
Nuclear Medicine Dosimetry	<i>Rome</i>
<i>La Sapienza University of Rome</i>	2019-2020
Postgraduate Specialization in <i>Nuclear Medicine</i> , Faculty of Medicine and Psychology	
Nuclear Medicine Dosimetry	<i>Roma</i>
<i>La Sapienza University of Rome</i>	2018-2019
Postgraduate Specialization in <i>Nuclear Medicine</i> , Faculty of Medicine and Psychology	
Applied Physics	<i>Rome</i>
<i>La Sapienza University of Rome</i>	2018-2019
Master Degree in <i>Obstetrics</i> , Sant'Andrea Hospital	
Applied Physics	<i>Rome</i>
<i>La Sapienza University of Rome</i>	2018-2019
Master Degree in <i>Nursery</i> , Sant'Andrea Hospital	
Applied physics	<i>Rome</i>
<i>La Sapienza University of Rome</i>	2018-2019
Master Degree in <i>Nursery</i> , San Pietro Andrea Hospital	
Radiological and nuclear agents	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	2015-2016
International Master Course in <i>Protection against CBRNE events</i>	
Nuclear risk and agents. Detection of radiological agents: Techniques	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	2015-2016
International Master Course in <i>Protection against CBRNE events</i>	
Radiation protection issues related to X-ray radiology devices	<i>Rome</i>
<i>Biomedical Campus University of Rome</i>	2014-2015
Master Course in <i>Radiation Protection</i>	
Nuclear risk and agents. Detection of radiological agents: Techniques	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	2014-2015
International Master Course in <i>Protection against CBRNE events</i>	
Radiological and nuclear agents	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	2013-2014
International Master Course in <i>Protection against CBRNE events</i>	
Nuclear risk and agents. Detection of radiological agents: Techniques	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	2013-2014
International Master Course in <i>Protection against CBRNE events</i>	
Radiation Protection	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	2013-2014
Post-graduate specialization school in Medical Physics	
Radiation Protection	<i>Rome</i>
<i>Tor Vergata University of Rome</i>	2012-2013
Post-graduate specialization school in Medical Physics	

Radiation Protection <i>Tor Vergata University of Rome</i> Post-graduate specialization school in Medical Physics	<i>Rome</i> 2011-2012
Radiation Protection <i>Tor Vergata University of Rome</i> Post-graduate specialization school in Medical Physics	<i>Rome</i> 2010-2011
Radioprotection in radiodiagnostic, nuclear medicine and radiotherapy <i>Federico II University of Neaples</i> Post-graduate specialization school in Medical Physics	<i>Neaples</i> 2009-2010
Radioprotection in radiodiagnostic, nuclear medicine and radiotherapy <i>Federico II University of Neaples</i> Post-graduate specialization school in Medical Physics	<i>Neaples</i> 2008-2009
Radioprotection in radiodiagnostic, nuclear medicine and radiotherapy <i>Federico II University of Neaples</i> Post-graduate specialization school in Medical Physics	<i>Napoli</i> 2007-2008
Foundamentals of medical physics, course assistant <i>Roma Tre University of Rome</i> University Physics Course	<i>Rome</i> 2007-2008
Radiation Protection <i>Tor Vergata University of Rome</i> Post-graduate specialization school in Medical Physics	<i>Rome</i> 2007-2008

OTHER TEACHING EXPERIENCES

Radiation Protection - Emerging challenges in medical and industrial sectors <i>CBRN Academy, Università degli Studi di Tor Vergata</i> CBRN Academy - Education and training	<i>Roma</i> February 2022
Physical surveillance in radiation protection <i>ASL Olbia Hospital</i> Course: Radiation Protection of workers and populations in a clinical environment	<i>Olbia</i> 2015
Radioactive Releases in the Environment: Impact and Assessment <i>La Sapienza University of Rome</i> Environmental impact of human activities involving the use of radioactive materials	<i>Rome</i> 2008-2009
Transport of Radioactive Material <i>La Sapienza University of Rome</i> Environmental impact of human activities involving the use of radioactive materials	<i>Rome</i> 2008-2009

Publications

ON PEER-REVIEWED JOURNALS

1. Ungania S, D'Arienzo M, Mezzenga E, Pizzi G, Vallati G, Ianiro A, Rea S, Sciuto R, Soriani A, Strigari L 2022 **A workflow for Dosimetry of ⁹⁰Y Radioembolization Based on Quantitative ^{99m}Tc-MAA SPECT/CT Imaging and a 3D-printed phantom** *Applied Sciences* 12, 10541. <https://doi.org/10.3390/app122010541>
2. Ungania S, D'Arienzo M, Nocentini S, D'Andrea M, Bruzzaniti V, Marconi R, Mezzenga E, Cassano B, Infusino E, Guerrisi A, Soriani A, Strigari L. 2022 **Optimization of ^{99m}Tc-MAA SPECT/CT Imaging for ⁹⁰Y Radioembolization Using a 3D-Printed Phantom** *Applied Sciences* 12(19):10022. <https://doi.org/10.3390/app121910022>
3. Ferrari P, Contessa G, Moro F, Gadani G, Lepore L, Pietropaolo A, Agostini P, Angiolini M, Alberghi C, Candido L, Capogni M, Capone M, Cataldo S, Contessa G, D'Arienzo M, Del Dotto A, Diamanti D, Nicola Dongiovanni D, Farini M, Ferrari P, Fiore A, Flammini D, Fonnesu N, Frisoni M, Gadani G, Grasso G, Guardati M, Guidoni D, Lamberti M, Lepore L, Mancini A, Mariani A, Marinari R, Marzo G, Mastroianni B, Moro F, Orefice A, Orsetti V, Pietropaolo A, Pinna T, Rizzo A, Rydzy A, Salvi S, Santoli D, Santucci A, Saraceno L, Sartorio C, Scaglione S, Sermenghi V, Serra E, Simonetti A, Spassovsky I, Terranova N, Tosti S, Ubaldini A, Utili M, Voukelatou K, Zito P, Zola D and Zummo G 2022 **Sorgentina-RF Fusion Neutron Plant: Preliminary Design of the Bioshielding In Compliance With Dose Constraints For Workers Exposure** *Radiation Protection Dosimetry*, ncac175, <https://doi.org/10.1093/rpd/ncac175>

4. Capotosti A, Moretti R, Milano A, Nardini M, Cusumano D Annunziata S, Capogni M, D'Arienzo M, Placidi L and Indovina L 2022 **Up-to-Date Optimization of the ^{90}Y -PET/CT Reconstruction Protocol for Volumetric Quantification in Trans-Arterial RadioEmbolization (TARE) Procedures in the Era of Theranostics** *Applied Sciences* 12, 8418
5. Sartorio C, Angiolini M, Flammini D, Pietropaolo A, Agostini P, Alberghi C, Candido L, Capogni M, Capone M, Cataldo S, D'Arienzo M, Del Dotto A, Diamanti D, Dongiovanni D, Ferrari P, Fiore A, Fomesu N, Frisoni M, Gadani G, Gentili A, Grasso G, Guardati M, Guidoni D, Lamberti M, Lepore L, Mancini A, Mariani A, Marinari R, Marzo GA, Mastroianni B, Moro F, Orefice A, Pinna T, Rizzo A, Rydzy A, Salvi S, Santoli D, Santucci A, Saraceno L, Scaglione S, Sermenghi V, Serra E, Simonetti A, Spassovsky IP, Terranova N, Tosti S, Ubaldini A, Utili M, Zito P, Zola D, Voukelatou K, Zummo G on behalf of the SRF-Collaboration. **Preliminary Assessment of Radiolysis for the Cooling Water System in the Rotating Target of SORGENTINA-RF.** *Environments*. 2022; 9(8):106. <https://doi.org/10.3390/environments9080106>
6. Contessa GM, Terranova N, Pinna T, Dongiovanni D, D'Arienzo M, Moro F, Ferrari P, Pietropaolo A and the SRF Collaboration, 2022 **Risk management of a fusion facility: Radiation Protection and Safety integrated approach for the Sorgentina-RF project,** *Environments*, *Environments* 2022, 9, 71. doi.org/10.3390/environments9060071
7. Sarnelli A, Negrini M, Mezzenga E, Feliciani G, D'Arienzo M, Amato A, Paganelli G, 2022 et al. **Modelling a new approach for radio-ablation after resection of breast ductal carcinoma in-situ based on the BAT-90 medical device,** *Scientific Reports* 12, 14 <https://doi.org/10.1038/s41598-021-03807-6>
8. Pietropaolo A, 2021 et al. **SORGENTINA-RF project: fusion neutrons for ^{99}Mo medical radioisotope production,** *European Physics Journal Plus* 136:1140, <https://doi.org/10.1140/epjp/s13360-021-02111-6>
9. Biancotto B, Malizia A, Contessa GM, D'Arienzo M, Solbiati MM, 2021 **First responder safety in the event of a Dirty Bomb detonation in urban environment** *International Journal of Safety and Security Engineering* Vol. 11, No. 4, August 2021, Pg. 369-365 <https://doi.org/10.18280/ijssse.110410>
10. Malizia A, Chierici A, Biancotto S, D'Arienzo M, Ludovici GM, d'Errico F, Manenti G, Marturano F 2021 **The HotSpot Code as a Tool to improve Risk Analysis during Emergencies: Predicting I-131 and Cs-137 Dispersion in the Fukushima Accident** *International Journal of Safety and Security Engineering* Vol. 11, No. 4, August 2021, Pg. 373-386 <https://doi.org/10.18280/ijssse.110421>
11. D'Arienzo M, Malizia A, Contessa GM, 2021 **Modelling mixing and transport of radioactive effluents in waterr eservoirs: An application to the operation of a fusion facility** *European Physics Journal Plus* 136, 1045 (2021). <https://doi.org/10.1140/epjp/s13360-021-01771-8>
12. D'Arienzo M, Contessa GM, Sandro S, Indovina L, 2021 **Management of patients receiving radionuclide therapy with unsealed radionuclides: A proposed approach to the definition of release criteria in Italy** *European Physics Journal Plus* 136, 1055 (2021), <https://doi.org/10.1140/epjp/s13360-021-01735-y>
13. Contessa GM, D'Arienzo M, Frisoni M, et al., 2021 **Preliminary evaluations of the environmental impact for the production of ^{99}Mo by fusion neutron** *Eur. Phys. J. Plus* 136, 637, <https://doi.org/10.1140/epjp/s13360-021-01404-0>
14. D'Arienzo M, Pimpinella M, Andreoli S, 2021 **Use of Monte Carlo simulations for uncertainty evaluation: a proposed approach for a challenging issue in the dosimetry of highdose per pulse electron beams using plane-parallel chambers** *Il Nuovo Cimento C* Vol. 44:128, DOI 10.1393/ncc/i2021-21128-0
15. Toigo V, Marcuzzi D, Serianni G 2021 **On the road to ITER NBIs: SPIDER improvement after first operation and MITICA construction progress,** 168, 112622 *Fusion Engineering Design* doi.org/10.1016/j.fusengdes.2021.112622
16. D'Arienzo M, Sarnelli A, Mezzenga E, Chiacchiararelli L, Amato A, Romanelli M, Cianni R, Cremonesi M, Paganelli G 2020 **Dosimetric Issues Associated with Percutaneous Ablation of Small Liver Lesions with ^{90}Y ,** 10 (6605) *Applied Sciences* [doi:10.3390/app10186605](https://doi.org/10.3390/app10186605)
17. D'Arienzo M, Di Paolo F, Chiacchiararelli L, Malizia A, Indovina L 2020 **A mathematical model for the diffusion of emergency warning messages during CBRNe emergencies,** *Journal of Contingencies and Crisis Management* DOI: 10.1111/1468-5973.12313
18. D'Arienzo M, Coniglio A 2020 **Assessment of the SARS-CoV-2 basic reproduction number, R_0 , based on the early phase of covid-19 outbreak in Italy** *Biosafety and Health*, 2(2), DOI: 10.1016/j.bsheat.2020.03.004
19. Malizia A, Chierici A, Biancotto S, D'Arienzo M, Marturano F 2020 **The HotSpot Code as a Tool to improve Risk Analysis during Emergencies: Predicting 131-I and 137-Cs Dispersion in the Fukushima Accident** *Atmosphere* In press
20. D'Arienzo M, Andreoli S, Pimpinella M 2020 **Evaluation of the uncertainty associated With the ion recombination correction in high dose-per-pulse electron beam dosimetry: A Monte Carlo Approach** *Phys Med Biol* Online ahead of print, [doi: 10.1088/1361-6560/ab79c2](https://doi.org/10.1088/1361-6560/ab79c2)

21. D'Arienzo M, Pimpinella M, De Coste V, Capogni M, Ferrari P, Mariotti F, Iaccarino G, Ungania S and Strigari L 2020 **Absorbed dose measurements from a ^{90}Y radionuclide liquid solution using LiF:Mg,Cu,P thermoluminescent dosimeters** *Physica Medica* 69 127-133
22. Sandri, Contessa, D'Arienzo, Guardati, Guarracino, Poggi and Villari 2020 **A Review of Radioactive Wastes Production and Potential Environmental Releases at Experimental Nuclear Fusion Facilities** *Environments* 7 6
23. Pimpinella M, Andreoli S, De Angelis C, Della Monaca S, D'Arienzo M, Menegotti L 2019 **Output factor measurement in high dose-per-pulse IORT electron beams** *Physica Medica* 61 94-52
24. Toigo V, D'Arienzo M et al. 2019 **Progress in the ITER neutral beam test facility** *Nuclear Fusion* 59:8 086058
25. D'Arienzo M, Pimpinella M, Capogni M, De Coste V, Filippi L, Spezi E, Patterson N, Mariotti F, Ferrari P, Chiamida P, Tapner M, Fischer A, Paulus T, Pani R, Iaccarino G, D'Andrea M, Strigari L, Bagni O 2017 **Phantom validation of quantitative Y-90 PET/CT based dosimetry in liver radioembolization** *EJNMMI Research*, 28;7(1):94
26. D'Arienzo M, Sandri S, Coniglio A, Fellin F, Battistella M, Dal Bello S 2017 **Air Activation at the PRIMA Neutral Beam Test Facility** *IEEE Transactions on Plasma Science*, *In Press*
27. D'Arienzo M and Cox M 2017 **Uncertainty analysis in the calibration of an emission tomography system for quantitative imaging** *Computational and Mathematical Methods in Medicine, Hindawi* Volume 2017 (2017), Article ID 9830386
28. Mezzenga E, D'Errico V, D'Arienzo M, D'Arienzo M, Strigari L, Koutla P, Matteucci F, Severi S, Paganelli G, Fenwick A, Bianchini D, Marocci F, Sarnelli A. 2017 **Quantitative accuracy of ^{177}Lu SPECT imaging for molecular radiotherapy** *PLoS One* 14;12(8):e0182888. doi: 10.1371/journal.pone.0182888.
29. Contessa GM, Guardati M, D'Arienzo M, Poggi C, Sandri S, D'Auria MC, Genovese E, Cannatà V. 2018 **The impact of Climate Change on radiological activities in Italy: safety implications and preventive measures** *Eur. Phys. J. Plus*, 133: 380 DOI 10.1140/epjp/i2018-12243-3
30. Biancotto S, D'Arienzo M, Pinto M, Contessa GM, Malizia A. 2018 **Analysis of a dirty bomb attack in a large metropolitan area: a case study** *Journal of Nuclear Instrumentation* *In Press*
31. D'Arienzo M, Pinto M, Sandri S, Zagarella R. 2017 **Radiological and Nuclear events: challenges, countermeasures and future perspectives** *Springer* *In Press*
32. D'Arienzo M 2017 **Dosimetry by ^{90}Y internal pair production PET imaging after liver radioembolization: how well can we quantify the absorbed dose to lesions?** *Il Nuovo Cimento* 40 C (2017) 97
33. Toigo V, Piovan R, Dal Bello S, et al. 2017 **The PRIMA Test Facility: SPIDER and MITICA test-beds for ITER neutral beam injectors** *New Journal of Physics* *In Press*
34. Toigo V, Piovan R, Dal Bello S, et al. 2016 **A substantial step forward in the realization of the ITER HNB system: The ITER NBI Test Facility** *Fusion Engineering and Design* *In Press*
35. D'Arienzo M, Cozzella ML, Fazio A, De Felice P, Iaccarino G, D'Andrea M, Ungania S, Cazzato M, Schmidt K, Kimiaei S and Strigari L 2016 **Quantitative ^{177}Lu SPECT imaging using advanced correction algorithms in non-reference geometry** *Physica Medica* 32 103
36. D'Arienzo M, Cazzato M, Cozzella M, Cox M, D'Andrea M, Fazio A, Fenwick A, Iaccarino G, Johansson L, Strigari L, Ungania S and De Felice P 2016 **Gamma camera calibration and validation for quantitative SPECT imaging with ^{177}Lu** *Applied Radiation and Isotopes* 112 156-164
37. Pinto M, Pimpinella M, Quini M, D'Arienzo M, Astefanoaei I, Loreti S and Guerra A 2016 **A graphite calorimeter for absolute measurements of absorbed dose to water: application in medium-energy x-ray filtered beams** *Physics in Medicine and Biology* 61 1738-1764
38. Willowson K, Tapner M, the QUEST investigator team and Bailey D 2015 **A multicentre comparison of quantitative ^{90}Y PET/CT for dosimetric purposes after radioembolization with resin microspheres** *European Journal of Nuclear Medicine and Molecular Imaging* 42 1202-1222
39. D'Arienzo M, Capogni M, Smyth V, Cox M, Johansson L, Solc J, Bobin C, Rabus H and Joulaeizadeh L 2014 **Metrological Issues in Molecular Radiotherapy** *EPJ Web of Conferences* 77 00022
40. Pimpinella M, Caporali C, Stravato A, Guerra AS and D'Arienzo M 2014 **Monte Carlo calculation of correction factors for dosimetry in radiotherapy using the correlated sampling method** *Romanian Reports in Physics*, Vol. 66, No. 1, P. 109–119, 2014

41. D'Arienzo M, Filippi L, Chiamida P, Chiacchiararelli L, Cianni R, Salvatori R, Scopinaro F and Bagni O 2013 **Absorbed dose to lesion and clinical outcome after liver radioembolization with ⁹⁰Y microspheres: a case report of PET-based dosimetry** *Ann Nucl Med* 27 676-680
42. D'Arienzo M 2013 **Emission of β^+ Particles Via Internal Pair Production in the $0^+ - 0^+$ Transition of ⁹⁰Zr: Historical Background and Current Applications in Nuclear Medicine Imaging** *Atoms* 1 2-12
43. Fabbri C, Mattone V, Casi M, De Lauro F, Agostini M, Bartolini N, D'arianzo M, Marchi G, Bartolomei M and Sarti G 2012 **Quantitative evaluation on ⁹⁰Y DOTATOC PET and SPECT imaging by phantom acquisitions and clinical applications in locoregional and systemic treatments** *Q J Nucl Med Mol Imaging* 56(6):522-8.
44. D'Arienzo M, Masciullo S, Sanctis V, Osti M, Chiacchiararelli L and Enrici R 2012 **Integral Dose and Radiation-Induced Secondary Malignancies: Comparison between Stereotactic Body Radiation Therapy and Three-Dimensional Conformal Radiotherapy International** *Journal of Environmental Research and Public Health* 9 4223-4240
45. Cicone F, D'Arienzo M, Carpaneto A, Russo E, Coniglio A, Bischof Delaloye A and Scopinaro F 2013 **Quantification of Dose Nonuniformities by Voxel-Based Dosimetry in Patients Receiving ⁹⁰Y-Ibritumomab-Tiuxetan** *Cancer Biotherapy Radiopharmaceuticals* 28 98-107
46. Filippi L, D'Arienzo M, Scopinaro F, Salvatori R and Bagni O 2013 **Usefulness of Dual-Time Point Imaging After Carbonated Water for the Fluorodeoxyglucose Positron Emission Imaging of Peritoneal Carcinomatosis in Colon Cancer** *Cancer Biotherapy Radiopharmaceuticals* 28 29-33
47. Toigo V, Boilson D, Bonicelli T, Piovan R, Hanada M, Chakraborty A, Agarici G, Antoni V, Baruah U, Bigi M, Chitarin G, Dal Bello S, Decamps H, Graceffa J, Kashiwagi M, Hemsworth R, Luchetta A, Marcuzzi D, Masiello A, Paolucci F, Pasqualotto R, Patel H, Pomaro N, Rotti C, Seriani G, Simon M, Singh M, Singh N, Svensson L, Tobari H, Watanabe K, Zaccaria P, Agostinetti P, Agostini M, Andreani R, Aprile D, Bandyopadhyay M, Barbisan M, Battistella M, Bettini P, Blatchford P, Boldrin M, Bonomo F, Bragulat E, Brombin M, Cavenago M, Chuilon B, Coniglio A, Croci G, Dalla Palma M, D'Arienzo et al 2015 **Progress in the realization of the PRIMA neutral beam test facility** *Nucl. Fusion* 55 083025
48. Guerra A, Loreti S, Pimpinella M, Quini M, D'Arienzo M, Astefanoaei I, Caporali C, Bolzan C and Pagliari M 2012 **A standard graphite calorimeter for dosimetry in brachytherapy with high dose rate ¹⁹²Ir sources** *Metrologia* 49 S179-S183
49. Bagatin M, Coniglio A, D'Arienzo M, De Lorenzi A, Gerardin S, Paccagnella A, Pasqualotto R, Peruzzo S and Sandri S 2012 **Radiation Environment in the ITER Neutral Beam Injector Prototype** *IEEE Trans. Nucl. Sci.* 59 1099-1104
50. De Sanctis V, Bolzan C, D'Arienzo M, Bracci S, Fanelli A, Cox M, Valeriani M, Osti M, Minniti G, Chiacchiararelli L and Enrici R 2012 **Intensity modulated radiotherapy in early stage Hodgkin lymphoma patients: Is it better than three dimensional conformal radiotherapy?** *Radiation Oncology* 7 129
51. Coniglio A, Di Renzi P, Vilches Freixas G, Della Longa G, Santarelli A, Capparella R, Nardiello B, Loidice C, Bianchi S, D'Arienzo M and Begnozzi L 2012 **Multiple 3D inversion recovery imaging for volume T1 mapping of the heart** *Magn Reson Med* 69 163-170
52. D'Arienzo M, Chiamida P, Chiacchiararelli L, Coniglio A, Cianni R, Salvatori R, Ruzza A, Scopinaro F and Bagni O 2012 **⁹⁰Y PET-based dosimetry after selective internal radiotherapy treatments** *Nuclear Medicine Communications* 33 633-640
53. D'Arienzo M, Cicone F, Chiacchiararelli L, Coniglio A, Delaloye A and Scopinaro F 2012 **Three-Dimensional Patient-Specific Dosimetry in Radioimmunotherapy with ⁹⁰Y-Ibritumomab-Tiuxetan** *Cancer Biotherapy Radiopharmaceuticals* 27 124-133
54. Bagni O, D'Arienzo M, Chiamida P, Chiacchiararelli L, Cannas P, D'Agostini A, Cianni R, Salvatori R and Scopinaro F 2012 **⁹⁰Y-PET for the assessment of microsphere biodistribution after selective internal radiotherapy** *Nuclear Medicine Communications* 33 198-204
55. Sandri S, Coniglio A, Daniele A, D'Arienzo M, Di Pace L, Pillon M 2011 **Personnel Dose Assessment At The Prima Neutral Beam Test Facility** *Fusion Science and Technology* 60 776-780
56. Bagatin M, Coniglio A, D'Arienzo M, De Lorenzi A, Gerardin S, Paccagnella A, Pasqualotto R, Peruzzo S, Sandri S and Zaniol B 2011 **Ionizing radiation compatibility in the MITICA neutral beam prototype** *Fusion Engineering and Design* 86 1268-1272
57. de Sanctis V, Persechino S, Fanelli A, Valeriani M, Bracci S, D'Arienzo M, Monarca B, Caperchi C, Raffa S, Enrici RM 2011 **Role of radiation therapy in mycosis fungoides refractory to systemic therapy** *Eur J Dermatol* 21 213-7
58. D'Arienzo M, Sandri S, Fellin F, Daniele A, Di Pace L and Coniglio A 2011 **Assessment of radiation dose rate resulting from activated corrosion products in the PRIMA facility cooling loops** *Fusion Engineering and Design* 86 2758-2761

59. D'Arienzo M, Borgognoni F, Coniglio A, Daniele A, Sandri S and Tosti S 2010 **Radiation dose due to tritium release from the ITER neutral beam injector** *Fusion Engineering and Design* 85 2288-2291
60. Minniti G, Valeriani M, Clarke E, D'Arienzo M, Ciotti M, Montagnoli R, Saporetti F and Enrici R 2010 **Fractionated stereotactic radiotherapy for skull base tumors: analysis of treatment accuracy using a stereotactic mask fixation system** *Radiation Oncology* 5 1
61. Sonato P, Agostinetti P, Anaclerio G, Antoni V, Barana O, Bigi M, Boldrin M, Cavenago M, Dal Bello S, Palma M, Daniele A, D'Arienzo M, De Lorenzi A, Ferro A, Fiorentin A, Gaio E, Gazza E, Grandò L, Fantini F, Fellin F, Luchetta A, Manduchi G, Milani F, Marcuzzi D, Novello L, Pasqualotto R, Pavei M, Pengo R, Peruzzo S, Pesce A, Pilan N, Piovani R, Pomaro N, Recchia M, Rigato W, Rizzolo A, Seriani G, Spolaore M, Spolaore P, Sandri S, Taliercio C, Toigo V, Valisa M, Veltri P, Zaccaria P, Zamengo A and Zanotto L 2009 **The ITER full size plasma source device design** *Fusion Engineering and Design* 84 269-274
62. Bourne N, Clothier RH, D'Arienzo M and Harrison P 2008 **The effects of terahertz radiation on human keratinocyte primary cultures and neural cell cultures** *Altern Lab Anim* 36 667-84
63. Ramundo-Orlando A, Gallerano G, Stano P, Doria A, Giovenale E, Messina G, Cappelli M, D'Arienzo M and Spassovsky I 2007 **Permeability changes induced by 130 GHz pulsed radiation on cationic liposomes loaded with carbonic anhydrase** *Bio-electromagnetics* 28 587-598
64. Zeni O, Gallerano G, Perrotta A, Romanò M, Sannino A, Sarti M, D'Arienzo M, Doria A, Giovenale E, Lai A, Messina G and Scarfi M 2007 **Cytogenetic observations in human peripheral blood leukocytes following in vitro exposure to THz radiation: a pilot study** *Health Physics* 92 349-357
65. Di Nallo AM, Ortenzia O, D'Arienzo M, Coniglio D and Benassi M 2006 **MRI quality control tools for procedures and analyses** *J Exp Clin Cancer Res* 25 121-7
66. Doria A, Gallerano G, Giovenale E, Messina G, Lai A, Ramundo-Orlando A, Sposato V, D'Arienzo M, Perrotta A, Romanò M, Sarti M, Scarfi M, Spassovsky I and Zeni O 2004 **THz radiation studies on biological systems at the ENEA FEL facility** *Infrared Physics Technology* 45 339-347
67. Scarfi MR, Romanò M, Di Pietro R, Zeni O, Doria A, Gallerano GP, Giovenale E, Messina G, Lai A, Campurra G, Coniglio D and D'Arienzo M 2003 **THz Exposure of Whole Blood for the Study of Biological Effects on Human Lymphocytes** *Journal of Biological Physics* 29 171-176
68. Giovenale E, D'Arienzo M, Doria A, Gallerano GP, Lai A, Messina G and Piccinelli D 2003 **Absorption and Diffusion Measurements of Biological Samples using a THz Free Electron Laser** *Journal of Biological Physics* 29 159-170
- CONFERENCE PROCEEDINGS PUBLISHED AS EXTENDED PAPERS AND INDEXED IN SCOPUS**
69. Bovi M, Capogni M, Caporali C, D'Arienzo M, De Felice P, Guerra AS, Pimpinella M, Pinto M, Toni MP 2012 **Ionizing radiation metrology in cancer radiation therapy** *Energia, Ambiente e Innovazione ENEA 03/2012* <http://www.enea.it/it/pubblicazioni/pdf-eai/maggio-giugno-2012/ionizing-radiation-metrology.pdf>
70. D'Arienzo M, Coniglio A, Poggi C and Sandri S 2012 **Radiation safety at the PRIMA facility: a review of shielding solutions and personnel dose assessment** *Proceedings of Third World IRPA Congress* May 13–18, Glasgow, England <http://www.irpa.net/page.asp?id=54619>
71. Sandri S, Coniglio A, D'Arienzo M and Poggi C 2011 **Radiation Safety System for SPIDER Neutral Beam Accelerator** *AIP Conference Proceedings* 1412, 407-414 <http://scitation.aip.org/content/aip/proceeding/aipcp/10.1063/1.3665342>
72. Sandri S, Coniglio A, Daniele A, D'Arienzo M, Pillon M and Poggi C 2010 **Special shielding solutions for the ITER neutral beam test facility** *Proceedings of Third European IRPA Congress* June 14–18, Helsinki, Finland <http://www.irpa2010europe.com/pdfs/proceedings/S08-P08.pdf>
73. Sandri S, Coniglio A, D'Arienzo M, Petrizzi L, Pillon M and Villari S, 2007 **Safety analysis for the maintenance of the calorimeter of the first ITER Neutral Beam injector** *8th International Topical Meeting on Nuclear Applications and Utilization of Accelerators, ACCAPP'07* <http://mathematicsandcomputation.cowhosting.net/ACCAPP-2007/data/papers/178065.pdf>
74. Coniglio A, Sandri S and D'Arienzo M 2006 **Personnel Radiation Protection at the ITER Nuclear Fusion Facility** *Second European IRPA congress on radiation protection - Radiation protection: from knowledge to action, France* http://www.iaea.org/inis/collection/NCLCollectionStore/_Public/38/045/38045720.pdf

75. Sandri S, Coniglio A and D'Arienzo M 2006 **Radiological safety analysis for the main incidents of the ITER systems** *Proceedings - Symposium on Fusion Engineering*, 21st IEEE/NPS Symposium on Fusion Engineering, SOFE'05; Knoxville, TN; United States; 26-29 Sept. 2005 <http://ieeexplore.ieee.org/document/4019027>
76. Sandri S, Coniglio A, Pillon M and D'Arienzo M 2005 **Neutron flux and activation calculations for a high current deuteron accelerator** *Proceedings of the IEEE Particle Accelerator Conference*, Volume 2005, Article number 1590704, Pages 1192-1194 <https://accelconf.web.cern.ch/accelconf/p05/PAPERS/WPAE010.PDF>
77. Giovenale E, Doria A, Gallerano GP, Messina G, Lai A, Ramundo-Orlando A, Sposato V, D'Arienzo M, Perrotta A, Romanò M, Sarti M, Scarfi MR, Spassovsky I and Zeni O 2004 **Effect on Biological Systems and Medical Application of THz Radiation** Special Session on *State-of-the art in the studies on the biological effects of EMF exposure in Europe* A 6th Framework Programme European Commission Coordination Action

Published Meeting Abstracts

Donatiello S, Capogni M, De Felice P, Cannatà V, D'Arienzo M, Strigari L and Tapner M 2016 **Absolute measurement in situ of the ^{90}Y activity in liquid solution by TDCR method and calibration of an ionization chamber** *Physica Medica* 32 104

Pinto M, Pimpinella M, D'Arienzo M and Guerra A 2016 **Establishment at ENEA-INMRI of a new absorbed dose to water primary standard for medium-energy x-ray beams** *Physica Medica* 32 52

D'Arienzo M, Cozzella M, Fazio A, Cazzato M, Ungania S, Iaccarino G, D'Andrea M, Schmidt K, Kimiaei S and Strigari L 2016 **Quantitative ^{177}Lu SPECT imaging using advanced correction algorithms in non-reference geometry** *Physica Medica* 32 103

D'Arienzo M, Cozzella M, Fazio A, Ungania S, Cazzato M, Iaccarino G, D'Andrea M, Strigari L, Fenwick A, Cox M, Johansson L and De Felice P 2016 **Absolute gamma camera calibration for quantitative SPECT imaging with ^{177}Lu** *Physica Medica* 32 114

D'Arienzo M, Cozzella M, Tapner M, Spezi E, Patterson N, Chiaramida P, Filippi L, Fisher A, Paulus T, Bagni O, Pimpinella M, Guerra A and Capogni M 2016 **Microspheres therapy of liver tumors: Calculations and measurements of absorbed doses for non-uniform activity distributions via ^{90}Y -PET/CT imaging** *Physica Medica* 32 103

D'Arienzo M, Capogni M, Smyth V, Cox M, Johansson L, Fenwick A, Solc J, Bobin C, Rabus H and Joulaeizadeh L 2016 **Internal dose assessment in molecular radiotherapy: Time for an agreed dosimetry protocol?** *Physica Medica* 32 103-104

Pinto M, Pimpinella M, D'Arienzo M, Astefanoaei I, Loreti S, Quini M and Guerra A 2015 **A new graphite calorimeter for the measurement of absorbed dose to water in medium energy x-ray beams** *Radiotherapy and Oncology* 115 S419

D'Arienzo M, Cazzato M, Ungania S, Cozzella L, Iaccarino G, D'Andrea M, Strigari L, Fenwick A, Johansson L and Cox M 2015 **Gamma Camera Calibration for SPECT Based Quantitative Imaging with Lu-177** *European Journal of Nuclear Medicine and Molecular Imaging* 42 S331-S332

D'Arienzo M, Tapner M, Spezi E, Patterson N, Chiaramida P, Filippi L, Ahrens M, Paulus T and Bagni O 2015 **Comparison of absorbed dose calculations for non-uniform activity distributions obtained via ^{90}Y -PET/CT after liver radioembolization** *European Journal of Nuclear Medicine and Molecular Imaging* 42 S339-S339

Smyth V, Bobin C, Johansson L, Joulaeizadeh L, D'Arienzo M, Capogni M, Rabus H, Cox M and Solc J 2015 **Metrology for molecular radiotherapy: what did the MetroMRT project achieve?** *European Journal of Nuclear Medicine and Molecular Imaging* 42 S260-S260

Pinto M, Pimpinella M, D'Arienzo M, Astefanoaei I, Loreti S, Quini M and Guerra A 2015 **A new graphite calorimeter for the measurement of absorbed dose to water in medium energy x-ray beams** *Radiotherapy and Oncology* 115 S419

D'Arienzo M, Guerra A, Loreti S, Caporali C, Pimpinella M, Astefanoaei I and Bolzan C 2014 **textbfA novel absorbed dose standard for the calibration of ^{192}Ir sources used in high dose rate brachytherapy** *Radiotherapy and Oncology* 111 S146-S147

D'Arienzo M, Cicone F, Chiacchiararelli L, Scopinaro F and Brainovich V 2010 **Therapy with Radio Labelled Antibodies: A Patientspecific Code for Isodose Quantification** *Radiotherapy and Oncology* 94 S22-S23

Joulaeizadeh L, Bobin C, Capogni M, Cox M, D'Arienzo M, Johansson L, de Pooter J, Rabus H, Smyth V and Solc J 2014 *European Journal of Nuclear Medicine and Molecular Imaging* 41 S221-S221

Parascandolo A, Ruzza A, Filippi L, Cristiano A, D'Arienzo M, Chiaramida P and Bagni O 2014 **Technical procedure for the validation of the absolute quantification of ^{90}Y images on a GE Discovery PET/CT scanner** *European Journal of Nuclear Medicine and Molecular Imaging* 41 S644-S644

- Bagni O, Spezi E, Patterson N, Filippi L, D'Arienzo M, Chiaramida P and Scopinaro F 2014 **A workflow for treatment evaluation of 90Y microspheres SIRT therapy of hepatic lesions based on FDG-PET and Y90-PET** *European Journal of Nuclear Medicine and Molecular Imaging* 41 S255-S255
- D'Arienzo M, Cozzella L, Fazio A, Carconi P, Iaccarino G, D'Andrea M, Ungania S, Cazzato M, Strigari L, Fenwick A, Johansson L and De Felice P 2014 SPECT Calibration and Activity Determination in Molecular Radiotherapy with ¹⁷⁷Lu *European Journal of Nuclear Medicine and Molecular Imaging* 41 S334-S334
- Fenwick AJ, Merrett JL, Green AJ, Johansson L and D'Arienzo M 2014 **A Proposed Calibration Technique for Quantitative Lu-177 Measurements in SPECT/CT** *European Journal of Nuclear Medicine and Molecular Imaging* 41 S553-S553
- D'Arienzo M, Cozzella M, Spezi E, Patterson N, Chiaramida P, Ruzza A, Parascandolo A, Filippi L and Bagni O 2014 **90Y-PET Imaging After Liver Radioembolization: From PET Calibration to Absorbed Dose Determination Using a Monte Carlo Approach** *European Journal of Nuclear Medicine and Molecular Imaging* 41 S331-S331
- Smyth V, Bobin C, Johansson L, Joulaeizadeh L, D'Arienzo M, Capogni M, Rabus H, Cox M and Solc J 2014 **The case for an international dosimetry protocol for molecular radiotherapy** *European Journal of Nuclear Medicine and Molecular Imaging* 41 S221-S221
- Smyth V, Bobin C, Johansson L, Joulaeizadeh L, D'Arienzo M, Capogni M, Rabus H, Cox M and Šolc J 2014 **Standards for MRT dosimetry: the MetroMRT project** *Physica Medica* 30 e9
- Bagni O, D'Arienzo M, Salvatori R, Filippi L, Cannas P, D'agostini A, Cianni R, Chiaramida P, Chiacchiararelli L and Scopinaro F 2011 **Can ⁹⁰Y-PET predict the outcome of lesions after SIRT? Biodistribution assessment and preliminary data of Voxel Based Dosimetry** *European Journal of Nuclear Medicine and Molecular Imaging* 38 S94-S94
- Ruzza A, Bagni O, Cristiano A, Mosca M, Antonetti G, Checchinato A, Romagna G, Schiattarella S, Chiacchiararelli L, Scopinaro F, Salvatori R, Chiaramida P and D'arienzo M 2011 **Absolute image quantification with Y-90-PET: phantom studies** *European Journal of Nuclear Medicine and Molecular Imaging* 38 S178-S179
- Bagni O, Filippi L, Salvatori R, D'agostini A, Cianni R, Notarianni E, Chiaramida P, Chiacchiararelli L, Scopinaro F and D'Arienzo 2012 **M Voxel dosimetry with ⁹⁰Y-PET for the assessment of liver toxicity** *European Journal of Nuclear Medicine and Molecular Imaging* 39 S337-S337
- D'Arienzo M, Chiaramida P, Chiacchiararelli L, Salvatori R, Ruzza A, Scopinaro F and Bagni O 2011 **Y-90-PET based dosimetry after selective internal radiotherapy (SIRT) treatments** *European Journal of Nuclear Medicine and Molecular Imaging* 38 S118-S118
- D'Arienzo M, Cicone F, Bagni O, Brainovich V, Chiacchiararelli L and Scopinaro F 2010 **A dosimetry tool for three-dimensional tumor dose assessment in radioimmunotherapy with Y-90-ibritumomab-tiuxetan** *European Journal of Nuclear Medicine and Molecular Imaging* 37 S238-S239
- Romagna G, Filippi L, Ruzza A, Cristiano A, Mosca M, Antonetti G, Checchinato A, Salvatori R, D'arienzo M and Bagni O 2011 **Technical protocol for dual time point PET acquisition in colon cancer** *European Journal of Nuclear Medicine and Molecular Imaging* 38 S177-S177
- Baldazzi I, Franchi G, Ragni p, Trapasso F, Martini ML, Del Mastro C, Lenza A, Ciotti M, Scopinaro F, Chiacchiararelli L, D'Arienzo M 2010 **In-111-Chloride calibration procedure for indirect quantification of Y-90 activity distribution in radioimmunotherapy** *European Journal of Nuclear Medicine and Molecular Imaging* 37 S485-S485
- Bagni O, D'Arienzo M, Salvatori R, Cannas P, D'agostini A, Cianni R, Chiaramida P, Chiacchiararelli L and Scopinaro F 2010 **PET detection of Y-90 microsphere distribution during therapy of liver metastases** *European Journal of Nuclear Medicine and Molecular Imaging* 37 S292-S293
- Ruzza A, Bagni O, Mosca M, Antonetti G, Chiacchiararelli L, Scopinaro F, Salvatori R, Chiaramida P and D'arienzo M 2010 **Hot-sphere based calibration procedures for PET imaging of Y-90 for assessment of activity distribution in Selective Internal Radiation Therapy (SIRT)** *European Journal of Nuclear Medicine and Molecular Imaging* 37 S501-S501
- Filippi L, D'Arienzo M, Salvatori R, Cannas P, Cianni R, Pelle G, Chiacchiararelli L, Scopinaro F and Bagni O 2012 **Planning sequential bilobar treatment with Y90 microspheres: usefulness of parametric imaging with ¹⁸F FDG PET/CT.** *European Journal of Nuclear Medicine and Molecular Imaging* 39 S186-S186
- Cicone F, D'Arienzo M, Russo E, Clarke E, Carpaneto A and Scopinaro F 2010 **Challenging adsorbed doses to lesions receiving Y-90-ibritumomab-tiuxetan: two vs three-dimensional estimations and their correlations with clinical outcome** *European Journal of Nuclear Medicine and Molecular Imaging* 37 S279-S280

D'Arienzo M, Chiacchiararelli L, Filippi L, Chiaramida P, Salvatori R, Scopinaro F and Bagni O 2012 **Dosimetry with Y-90 PET after Liver Radioembolization: The Role of Bed and EUD for the Assessment of Non Uniform Activity Distributions in Lesions** *European Journal of Nuclear Medicine and Molecular Imaging* 39 S248-S248

European technical reports

McEwen M, Burns D, D'Arienzo M, De Pooter J, Pinto M, Rapp B **Report to CCRI(I) on the recommendations of ICRU Report 90 CCRI(I)/17-07 (2017)** Report CCRI(I) 23th meeting

Pinto M, D'Arienzo M, Bovi M, Guerra AS, Pimpinella M and Toni MP **Report to the CCRI section I on the activity carried out at ENEA-INMRI on photon and charged-particles dosimetry in the period 2015-2017** Report CCRI(I) 23th meeting

Pinto M, D'Arienzo M, Bovi M, Guerra AS, Pimpinella M and Toni MP **Report to the CCRI section I on the activity carried out at ENEA-INMRI on photon and charged-particles dosimetry in the period 2013-2015** Report CCRI(I) 22th meeting

Toni MP, Pinto M, D'Arienzo M, Guerra AS, Pimpinella M and Bovi M **Report to the CCRI section I on the activity carried out at ENEA-INMRI on photon and charged-particles dosimetry in the period 2011-2013** Report CCRI(I) 21th meeting

Coniglio A, D'Arienzo M, Petrizzi L, Pillon M, Sandri S and Villari S 2006 **The First ITER NB Injector and the ITER NB test facility: Progress In The Design** EFDA task: TW4-THHN-IITF2, Rapporto BAS-ION-IRP (2006)8

Sandri S, Borgognoni F, D'Arienzo M, Daniele A and Tosti S 2008 **The first ITER NB Injector and the ITER NB Test Facility: Nuclear analysis and safety assessment** EFDA task TW6-THHN-NBTF1, Rapporto ENEA RTI (2008)4

D'Arienzo M, Daniele A and Sandri S 2008 **Shielding and dose assessment** F4E Grant F4E-2008-GRT-011-01, Deliverable Safety

Bagatin M, Coniglio A, D'Arienzo M, De Lorenzi A, Gerardin S, Paccagnella A, Pasqualotto R, Peruzzo S and Sandri, S 2009 **Ionizing Radiation Compatibility Issues in the MITICA Experiment** F4E-2009-GRT-32-PMS-H.CD, 7.3/D1

Books

Sandri S, D'Arienzo M and Coniglio A 2008 **Radioprotezione di base. Apparecchi radiologici con tensione di accelerazione inferiore a 400kV** CISU Editore, ISBN: 8879754165, pg. 268

D'Arienzo M, Coniglio A and Sandri S 2014 **Radioprotezione avanzata. Radionuclidi e acceleratori di elettroni fino a 10 MeV** CISU Editore, ISBN: 978-88-7975-522-1, pg. 400

Book chapter

D'Arienzo M, Mezzenga E, Sarnelli A, **Quality controls for hybrid PET/MR** In: Alberto Signore, *Encyclopedia of - Nuclear Medicine and Molecular Imaging*. vol. 1, pp. 505-510. Oxford: Elsevier. dx.doi.org/10.1016/B978-0-12-822960-6.00191-5

D'Arienzo M, Mezzenga E, Sarnelli A, **Quality controls for PET/CT** In: Alberto Signore, *Encyclopedia of - Nuclear Medicine and Molecular Imaging*. vol. 1, pp. 497-504. Oxford: Elsevier. dx.doi.org/10.1016/B978-0-12-822960-6.00190-3

Mezzenga E, Sarnelli A, D'Arienzo M, **Quality Control of Gamma Cameras** In: Alberto Signore, *Encyclopedia of - Nuclear Medicine and Molecular Imaging*. vol. 1, pp. 489-496. Oxford: Elsevier. dx.doi.org/10.1016/B978-0-12-822960-6.00181-2

Sarnelli A, Mezzenga E, D'Arienzo M, **Quality assurance and quality controls in nuclear medicine** In: Alberto Signore, *Encyclopedia of - Nuclear Medicine and Molecular Imaging*. vol. 1, pp. 485-488. Oxford: Elsevier. dx.doi.org/10.1016/B978-0-12-822960-6.00182-4

D'Arienzo M, Filippi L and Bagni O **Quantitative postradioembolization imaging using PET/CT** In: *Handbook Of Radioembolization: Physics, Biology, Nuclear Medicine, and Imaging* Francis and Taylor Publishers, December 2019, CRC Press

Cianni R, Pelle G and M. D'Arienzo 2015 **Radiembolization with ⁹⁰Y-microspheres in the treatment of liver metastatic disease from breast cancer** In: *Microspheres: technologies, applications and role in drug delivery systems* Nova Science Publishers

D'Arienzo M 2012 **Dose assessment following tritium intake** In: *Tritium: Production, Uses and Environmental Impact* Nova Science Publishers

Other publications

Contessa GM, D'Arienzo M, rizzo A., De Crescenzo S 2022 **Valutazione e gestione degli effluenti aeriformi negli acceleratori moderni** *Bollettino AIRP* in press

Contessa GM e D'Arienzo M, 2022 **La gestione degli scarichi radioattivi liquidi immessi nel sistema fognario da attività mediche e industriali - Come valutare l'esposizione dei lavoratori degli impianti di depurazione acque superficiali** *Ambiente sicurezza sul Lavoro* EPC Editore

Contessa GM, D'Arienzo M, Frisoni M, Ferrari P, Panichi R, Moro F, Pietropaolo A, 2021 **Valutazioni preliminari dell'impatto ambientale degli effluenti liquidi dovuti alla produzione di ⁹⁹Mo mediante neutroni da fusione** *Bollettino AIRP* Volume 179, 1-6, ISSN 1591-3481

Sandri S, D'Arienzo M 2020 **Rilascio del paziente dopo trattamenti terapeutici con radionuclidi non sigillati** *Bollettino AIRP* Volume 178, 5-6, ISSN 1591-3481

Contessa GM, D'Arienzo M et al. 2019 **Rifiuti radioattivi e rilasci degli impianti a fusione nucleare** *Convegno Nazionale Agenti Fisici* 5-7 Giugno 2019

D'Arienzo M, Capogni M and De Felice P 2013 **La metrologia delle radiazioni ionizzanti nella radioterapia molecolare** *Tutto Misure* 15 4

Bovi M, Capogni M, Caporali C, D'Arienzo M, De Felice P, Guerra AS, Pimpinella M, Pinto M and Toni MP 2013 **Ionizing radiation metrology in cancer radiation therapy** *Energia Ambiente e Innovazione* n. 3 Maggio-Giugno 2012
<http://www.enea.it/it/pubblicazioni/pdf-eai/maggio-giugno-2012/ionizing-radiation-metrology.pdf>

D'Arienzo M and Sandri S 2008 **Rischi Fisici: Radiazioni Ionizzanti - Chimica, Raffinerie e Nucleare** I CORSI - IPSOA n. 1/2008, Editrice Wolters Kluwer

D'Arienzo M and Sandri S 2008 **Rischi Fisici: Radiazioni Ionizzanti - Sanità e servizi sociali** I CORSI - IPSOA n. 2/2008, Editrice Wolters Kluwer

Course participation

Radiation protection in healthcare. Novelties introduced by the Italian Legislative Decree 101/2020

PROFESSIONEFAD
Certified Continuing Medical Education (CME) credits

Webinar Training Course

FAD n. 2772-339822

Radiation protection in healthcare and dentistry. Novelties introduced by the Italian Legislative Decree 101/2020

CONOSCENZA MEDICA
Certified Continuing Medical Education (CME) credits

Webinar Training Course

FAD n. 5371-362663

Radiation protection in healthcare - 2022

ITALIAN ASSOCIATION OF MEDICAL PHYSICS
Certified Continuing Medical Education (CME) credits nr. 416

Radiology course

April 12 through November, 22 - 2022, Rome

Radiation protection in healthcare - 2021

ITALIAN ASSOCIATION OF MEDICAL PHYSICS
Certified Continuing Medical Education (CME) credits

Radiology course

February 23 through October, 26 - 2022, Rome

Updates on medical exposures

ITALIAN SOCIETY OF MEDICAL RADIOLOGY
Certified Continuing Medical Education (CME) credits

Live - Webinar Training Course

September 15 through December, 1 - 2021,
Rome

Quality assurance in nuclear medicine and new frontiers in quantitative imaging

ITALIAN ASSOCIATION OF MEDICAL PHYSICS
Certified Continuing Medical Education (CME) credits

Webinar Training Course

May 1, 2021 through April 30 - 2022, Rome

The Italian Legislative Decree 101/2020, Application of the EU directive 2013/59/EURATOM

ITALIAN ASSOCIATION OF MEDICAL PHYSICS
Certified Continuing Medical Education (CME) credits

Webinar Training Course

September 15-24, 2021, Rome

Radiation protection in healthcare - 2021

ITALIAN ASSOCIATION OF MEDICAL PHYSICS

Certified Continuing Medical Education (CME) credits, Via del Cardello, 24 Roma

Radiology course

September 17-21, 2018, Rome

39° course on civil and military cooperation – COCIM

ISTITUTO SUPERIORE DI STATO MAGGIORE INTERFORZE

Italian Defense Higher Studies Institute, Piazza della Rovere, 83, 00165 Roma RM

Italian Defense Higher Studies Institute

October 15-26, 2018, Rome

Radiation protection of medical, industrial and research accelerators

SCUOLA SUPERIORE DI RADIOPROTEZIONE CARLO POLVANI DELL'AI RP

Director: Prof. Giorgio Curzio

C.R. ENEA Frascati, Rome

19-20 May 2016

Radiobiology and Radiobiological Modelling in Radiotherapy

CLATTERBRIDGE CANCER CENTRE

Coordinator: Prof. Alan E. Nahum

Chester, UK

11-14 May 2010

Dosimetria individuale da contaminazione interna: conoscenze, metodologie, pratica

SCUOLA SUPERIORE DI RADIOPROTEZIONE CARLO POLVANI DELL'AI RP

Coordinator: Giuseppe Tarroni

C.R. ENEA Casaccia, Rome

18-22 October 2004

Static and Low Frequency Magnetic Fields: Physical Concepts, Biological Effects, Mechanisms and Limit Setting

SCUOLA INTERNAZIONALE DI BIOELETTROMAGNETISMO ALESSANDRO CHIABRERA

Director: Prof. Ferdinando Bersani

Erice, Sicily

20-28 Aprile 2004

Tecniche e metodi della dosimetria in vivo in radioterapia

SCUOLA SUPERIORE DI FISICA IN MEDICINA P. CALDIROLA DELL'AI FM

Coordinator: Claudio Fiorino

Villa Olmo, Como

19-21 March 2001

Conference and congress participation

THz-Bridge Workshop

POSTER

- D'Arienzo M et al. Absorption and diffusion measurements of biological samples using a THz Free Electron Laser
- Scarfi MR et al. THz exposure of whole blood for the study of biological effects on human lymphocytes
- D'Arienzo et al. Studies on cell membrane model functionality: an experimental set-up for liposomes irradiation

Capri, Italy

28 september - 2 october 2002

National Radiation Protection Congress, AIRP

ORAL PRESENTATION WITH FULL-PAPER SUBMISSION

- Sandri S, Brosio E, Calenda E, Cifani R, Cocomello G, Coniglio A, D'arianzo M Regulatory and radiation protection issues related to low and medium energy proton accelerators in the clinical environment (Original title: Problematiche autorizzative e di radioprotezione connesse con l'impiego di acceleratori di protoni di media e bassa energia in ambito sanitario)

Verona, Italy

16-18 september 2004

Particle Accelerator Physics Conference

POSTER

- Sandri S, Coniglio A, D'Arienzo M Radiological safety analysis for the main incidents of the ITER systems

Knoxville, Tennessee

26-29 September 2005

European IRPA congress on radiation protection - Radiation protection: from knowledge to action

ORAL PRESENTATION

- Coniglio A, Sandri S, D'Arienzo M Personnel Radiation Protection at the ITER Nuclear Fusion Facility, INIS-FR-5802

Pars, France

15-19 May 2006

Congress of the International Radiation Protection Association (IRPA12)

POSTER

- Sandri S, Coniglio A, D'Arienzo M Radiation Protection at the ITER NBI facility

Buenos Aires, Argentina

19-24 October 2008

XVIII Congress of the Italian Association of Radiation Oncology

Milan, Italy

ORAL PRESENTATION

15-18 November 2008

- Integral dose in stereotactic radiation therapy (Original title: La dose integrale nella radioterapia stereotassica), Selected oral presentation

International Symposium on Fusion Nuclear Technology

Dalian, China

POSTER

11-16 October 2009

- D'Arienzo M, Sandri S, Coniglio A, Daniele Anzo M Tritium production and diffusion from ITER Neutral Beam test facility

XIX Congress of the Italian Association of Radiation Oncology

Bologna, Italy

ORAL PRESENTATION

14-17 November 2009

- Intensity modulated and 3D conformal radiation therapy for the treatment of non-Hodgkin lymphoma: assessment of the integral dose and optimization of the dose to OARs (Original title: Radioterapia a intensità modulata e 3D-conformazionale nel linfoma di Hodgkin: valutazione della dose integrale e ottimizzazione della dose agli organi a rischio)
- Assessment of integral doses in SBRT and comparison with 3D conformal radiation therapy (Original title: Valutazione delle basse dosi integrali nella terapia stereotassica corporea e confronto con 3D-conformazionale)

MIRO – Molecular Imaging in Radiation Oncology

Brussels, Belgium

POSTER

18-20 March 2010

- Therapy with radio labelled antibodies: a patient-specific code for isodose quantification

EANM 2010, Annual Congress of the European Association of Nuclear Medicine

Vienna, Austria

POSTER E ORAL PRESENTATION

9-13 October 2010

- D'Arienzo M, Cicone F, Bagni O, Brainovich V, Chiacchiararelli L, Scopinaro F. A dosimetry tool for three-dimensional tumor dose assessment in radioimmunotherapy with ⁹⁰Y-ibritumomab-tiuxetan [abstract]. Eur J Nucl Med Mol Imaging 2010;37(Suppl 2):S238-39
- Bagni O, D'Arienzo M, Salvatori R, Cannas P, D'Agostini A, Cianni R, Chiaramida P, Chiacchiararelli L, Scopinaro F PET detection of ⁹⁰Y microsphere distribution during therapy of liver metastases [abstract]. Eur J Nucl Med Mol Imaging 2010;37(Suppl 2):S198-S311

International Conference on Applications of Nuclear Techniques

Crete, Greece

ORAL PRESENTATION

12-18 June 2011

- Sandri S, Coniglio A, D'Arienzo M and Poggi CRadiation Safety System for SPIDER Neutral Beam Accelerator, AIP Conference Proceedings

EANM 2011, Annual Congress of the European Association of Nuclear Medicine

Birmingham, UK

POSTER E ORAL PRESENTATION

15-19 October 2011

- D'Arienzo M, Chiaramida P, Chiacchiararelli L, Salvatori R, Ruzza A, Scopinaro F and Bagni O 2011 Y-90-PET based dosimetry after selective internal radiotherapy (SIRT) treatments [abstract] Eur J Nucl Med Mol Imaging 38 S118-S118
- Bagni O, D'Arienzo M, Salvatori R, Filippi L, Cannas P, D'Agostini A, Cianni R, Chiaramida P, Chiacchiararelli L and Scopinaro F 2011 Can ⁹⁰Y-PET predict the outcome of lesions after SIRT? Biodistribution assessment and preliminary data of Voxel Based Dosimetry [abstract] Eur J Nucl Med Mol Imaging 38 S94-S94

Conference on Advanced Metrology for Cancer Therapy

Braunschweig, Germany

ORAL PRESENTATION

29 November - 1 December 2011

- A standard graphite calorimeter for dosimetry in brachytherapy with high dose rate ¹⁹²Ir sources

V Alpe-Adria Medical Physics Meeting

Trieste, Italy

ORAL PRESENTATION

3-5 May 2012

- ENEA's absorbed dose standard for the calibration of ¹⁹²Ir sources used in high dose rate brachytherapy

The 13th International Congress of the International Radiation Protection Association (IRPA)

Glasgow, UK

ORAL PRESENTATION

14-18 May 2012

- Sandri S, Coniglio A, D'Arienzo M, Guarracino M, Dose Assessment Following Radiation Accidents At The Prima Facility
- Sandri S, Coniglio A, D'Arienzo M, Radiation Safety at the PRIMA facility: A Review of Shielding Solutions and Personnel Dose Assessment

World Congress on Medical Physics and Biomedical Engineering

Beijing, China

POSTER E ORAL PRESENTATION

26-31 May 2012

- A graphite calorimeter for the measurement of the absorbed dose to water for ^{192}Ir sources used in high dose rate brachytherapy
- Education and Training in Medical Physics and Continuing Professional Education for Medical Physicists in Italy
- Metrology for Molecular Radiotherapy: a forthcoming EURAMET project

EANM 2012 Annual Congress of the European Association of Nuclear Medicine

Milan, Italy

ORAL PRESENTATION

27-31 October 2012

- Dosimetry with ^{90}Y PET after liver radioembolization: the role of BED and EUD for the assessment of non uniform activity distributions in lesions

National Radiation Protection Congress, AIRP

Palermo, Italy

ORAL PRESENTATION WITH FULL PAPER SUBMISSION

18-20 September 2013

- An absorbed dose primary standard for the calibration of ^{192}Ir sources used in high dose rate brachytherapy (Titolo originale: Un campione primario in grafite per la misura della dose assorbita nella brachiterapia ad alto rateo di dose con sorgenti di ^{192}Ir)

16th International Congress of Metrology

Paris, France

ORAL PRESENTATION

7-10 October 2013

- Metrological issues in molecular radiotherapy

ESTRO 33 Conference

Vienna, Austria

ORAL PRESENTATION

4 - 8 April 2014

- A novel absorbed dose standard for the calibration of ^{192}Ir sources used in high dose rate brachytherapy

EANM 2015, Annual Congress of the European Association of Nuclear Medicine

Hamburg, Germany

POSTER

10-14 October 2015

- Comparison of absorbed dose calculations for nonuniform activity distributions obtained via ^{90}Y PET/CT after liver radioembolization
- Gamma camera calibration for spect based quantitative imaging with Lu-177

IAEA International Conference on Clinical PET-CT and Molecular Imaging (IPET 2015)

Vienna, Austria

POSTER

5-9 October 2015

- Dose assessment in molecular radiotherapy: need for standardization and harmonization of nuclear imaging procedures
- ^{90}Y -PET imaging after liver radioembolization for the assessment of the absorbed dose to lesions

Congress of the Italian association of Medical Physics

Perugia, Italy

POSTER

25-28 February 2016

- Absolute gamma camera calibration for quantitative SPECT imaging with ^{177}Lu
- Absolute measurement in situ of the ^{90}Y activity in liquid solution by TDCR method and calibration of an ionization chamber
- Establishment at ENEA-INMRI of a new absorbed dose to water primary standard for medium-energy x-ray beams
- Quantitative ^{177}Lu SPECT imaging using advanced correction algorithms in non-reference geometry
- Internal dose assessment in molecular radiotherapy: time for an agreed dosimetry protocol?
- Microspheres therapy of liver tumors: calculations and measurements of absorbed doses for non-uniform activity distributions via ^{90}Y -PET/CT imaging

102° Congress of the Italian Physics society

Padua, Italy

ORAL PRESENTATION

26-30 September 2016

- Liver radioembolization dosimetry by ^{90}Y internal pair production PET imaging: how well can we quantify the absorbed dose to lesions?

103° Congress of the Italian Physics society

Trento, Italia

ORAL PRESENTATION

11-15 September 2016

- Recent progresses in the realisation of graphite calorimeters for the measurement of the absorbed dose to water at ENEA-INMRI

EANM 2016, Annual Congress of the European Association of Nuclear Medicine

Barcelona, Spain

POSTER

15-19 October 2016

- Calculation and measurement of absorbed doses for non-uniform activity distributions in liver radioembolization using ⁹⁰Y-PET images

National Radiation Protection Congress, AIRP

Trieste, Italia

POSTER WITH FULL PAPER SUBMISSION

19-21 September 2016

- Zicari C and D'Arienzo M Simulation of a fire in a nuclear medicine department with environmental release of radionuclides: assessment of the radionuclide deposition and doses to workers and population (Original title: Simulazione di un incendio in un dipartimento di medicina nucleare con rilascio di radionuclidi in atmosfera: stima della deposizione e della dose ai lavoratori e alla popolazione)

106° Congress of the Italian Physics society

SIF, Online webinar

COMUNICAZIONE PREMIATA CON PUBBLICAZIONE SU RIVISTA

September 14-18, 2020

- D'Arienzo M, 2020 Use of Monte Carlo simulation for uncertainty evaluation: a proposed approach for a challenging issue in dosimetry of high dose per pulse electron beams

ESTRO 2021, European Society for Radiotherapy and Oncology

Madrid

PRESENTATION NUMBER: PO-174

August 27-31, 2021

- Martucci P, Pimpinella M, Russo S, Fiandra C, D'Arienzo M, De Coste V, Pugliatti C, De Felice P, Stasi M, 2020 An Italian project for dosimetry audits in radiotherapy

3rd European Congress of Medical Physics

Online webinar

ORAL COMMUNICATIONS

June, 16-19, 2021

- Pimpinella M, Fiandra C, Russo S, D'Arienzo M, De Coste V, Fierro C, Pugliatti C, 2021 Reference Dosimetry Audits for Radiotherapy Beams in Italy

Invited Talks

Corso Nucleo Avanzato NR

Scuola Centrali Antincendi - Vigili del Fuoco

RELAZIONE A INVITO

27 novembre 2021

- Effetti Biologici delle radiazioni ionizzanti e problematiche connesse con l'impiego di uranio impoverito

Live Webinar

Ordine dei Chimici e dei Fisici

CORSO DI FORMAZIONE ECM

3-4 maggio 2021

- Rischio di esposizione da agenti fisici negli ambienti di lavoro: radiazioni ionizzanti

39° Corso di Cooperazione civile militare – COCIM

Centro Alti Studi per la Difesa - CASD

ISTITUTO SUPERIORE DI STATO MAGGIORE INTERFORZE

15-26 ottobre 2018

- Ipotesi di attacco radiologico in prossimità di infrastrutture critiche

Corso sulla sicurezza nei laboratori con impiego di sorgenti radioattive di tipo sigillato e/o macchine radiogene

Firenze, Italia

UNIVERSITÀ DEGLI STUDI DI FIRENZE

16 maggio 2018

- Radioprotezione da neutroni

La Fusione termonucleare e gli aspetti di radioprotezione

ENEA Frascati, Italia

PRESENTAZIONE ORALE

19 Giugno 2018

- D'Arienzo M, Neutral Beam Injectors e campi neutronici

Trattamento dei tumori epatici con tecnologia SIRT: confronto multidisciplinare e strutturazione di PDTA

Roma, Italia

INVITO A TAVOLA ROTONDA

29 Aprile 2016

- Panel Discussion: Le criticità aperte

9° Congresso Nazionale AIFM

POSTER E RELAZIONE A INVITO

- Supporto Metrologico INMRI alle fisiche sanitarie

Perugia, Italia

25-28 febbraio 2016

Imaging Tomografico quantitativo SPECT e PET per dosimetria a livello di Voxel in terapia medico nucleare. Scuola Caldirola AIFM

RELAZIONE A INVITO

- Progetto MetroMRT: stato dell'arte e sviluppi futuri

Roma, Italia

26-27 febbraio 2015

Dosimetria a livello di voxel in terapia medico nucleare: aspetti di base, indicazioni ed applicazioni cliniche. Scuola Caldirola AIFM

RELAZIONE A INVITO

- Voxel Dosimetry nella radioimmunoterapia dei NHL

Roma, Italia

7-8 febbraio 2013

Aggiornamenti in Terapia Radioisotopica II

RELAZIONE A INVITO

- Dosimetria nella radioembolizzazione con microsferi di ^{90}Y

Roma, Italia

27-28 dicembre 2012

Modern Clinical Radiobiology

RELAZIONE A INVITO

- Metrology for Molecular Radiotherapy: an EMRP joint research project

Roma, Italia

7-8 giugno 2012

Aggiornamenti in Terapia Radioisotopica

RELAZIONE A INVITO

- Dosimetria delle lesioni - Relazione a invito

Roma, Italia

17-18 dicembre 2010

Participation in committees and work groups

2015 ASL Roma C, Internal scientific committee

Commissione

from 2014 IEC Working group, SC 62C - Equipment for radiotherapy, nuclear medicine and radiation dosimetry http://www.iec.ch/dyn/www/f?p=103:7:0:::FSP_ORG_ID:1362

Work group

from 2014 IRPA Working Group, International Radiation Protection Association (IRPA), Security of Radioactive Sources Task Group <http://www.irpa.net/page.asp?id=6>

Work group

Awards

INTERNATIONAL

Award, Wien 5-9 October 2015. IPET 2015 Award-winning Poster - International Conference on Clinical PET-CT and Molecular Imaging (IPET 2015): IAEA-CN-232-385 Conference ID: 46534

2015 D'Arienzo M, Cozzella L, Carconi P, Spezi E, Patterson N, Chiaramida P, Filippi L and Bagni O 2015 **^{90}Y -PET imaging after liver radioembolization for the assessment of the absorbed dose to lesions**

IAEA, Wien

NATIONAL

2016 **First award**, 102° Congress of the Italian Physics Society, Padua 26-30 September 2016. Best oral presentation, Section: Biophysics and Medical Physics. D'Arienzo M, 2016 **Liver radioembolization dosimetry by ^{90}Y internal pair production PET imaging: how well can we quantify the absorbed dose to lesions?** <http://www.sif.it/attivita/congresso/102/comunicazioni>

SIF, Padua

- 2017 **Award**, Minerva Award issued by "Roma Foundation - Sapienza University", awarding researchers for their outstanding achievements making a significant contribution to scientific progress to their field. Title of the thesis: **Metrology in molecular radiotherapy: accuracy achievable in quantitative SPECT imaging with ¹⁷⁷Lu and PET dosimetry with ⁹⁰Y microspheres**
<http://www.fondazionesapienza.uniroma1.it/?q=node/449>, December 13th, 2017
La Sapienza University, Rome
- 2020 **Scientific Merit of the Ph. D. thesis**, La Sapienza Università Editor award". Thesis title: **Metrology in molecular radiotherapy: accuracy achievable in quantitative SPECT imaging with ¹⁷⁷Lu and PET dosimetry with ⁹⁰Y microspheres**
<http://www.fondazionesapienza.uniroma1.it/?q=node/449>, October 19th, 2020
La Sapienza Università Editrice, Rome
- 2020 **Oral presentation awarded with publication on peer-reviewed journal**, 106° Congress of the Italian society of Physics, September 14-18, 2020. Oral presentation awarded with publication on the *Nuovo Cimento* journal. D'Arienzo M, 2020 **Use of Monte Carlo simulation for uncertainty evaluation: a proposed approach for a challenging issue in dosimetry of high dose per pulse electron beams.**
<https://www.sif.it/attivita/congresso/106/comunicazioni-per-pubblicazione>
SIF, ongress of the Italian society of Physics

Institutional appointments

- 09/2020 **Funding Member**, CCRI Radiopharmaceutical Therapy Working Group
BIPM, Paris
- 10/2015 **Expert**, designed expert at the IAEA International Conference on Clinical PET-CT and Molecular Imaging (IPET 2015). Protocollo ENEA/2015/11433/UCREL-INT
Vienna, Austria
- 03/2015 **Expert**, at CCRI(I) – Consultative Committee for Ionizing Radiation (Section I, x- and gamma rays, charged particles, 22° meeting
Paris, France
- 03/2013 **Expert**, at CCRI(I) – Consultative Committee for Ionizing Radiation (Section I, x- and gamma rays, charged particles, 21° meeting
Paris, France

Reviewer activity and participation in editorial boards

- Ed. Board **Journal of Radioprotection Research**, Sciknow, <http://www.sciknow.org/journals/show/id/jrr>
Journal
- Reviewer **Biomedicine and Biotechnology**, SciePub, <http://www.sciepub.com/journal/BB>
Journal
- Reviewer **Advances in Molecular Imaging**, Scirp, <http://www.scirp.org/journal/ami/>
Journal
- Reviewer **Current Pharmaceutical Design**, Bentham Science, <http://www.benthamscience.com/cpd/>
Journal
- Reviewer **Nuclear Instruments and Methods A**, <http://www.journals.elsevier.com>
Journal
- Reviewer **Journal of Nuclear Medicine**, <http://jnm.snmjournals.org/>
Journal
- Reviewer **Frontiers in Oncology**, <http://www.frontiersin.org/oncology>
Journal
- Reviewer **Cancer Biotherapy and Radiopharmaceuticals**, <http://online.liebertpub.com/cbr>
Journal

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