# VIRGINIA LIBERINI

#### PERSONAL INFORMATION

Name: Virginia Surname: Liberini

Date of birth: 21th November 1983

Mailing Address: Via Pietro Palmieri 28 - 10138, Turin (Italy)

Business Address: S.C.D.U. Medicina Nucleare U – Chief Prof. D. Deandreis

A.O.U. "Città della Salute e della Scienza" - University of Turin, Italy

Corso Dogliotti 14 – 10126, Turin (Italy)

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### **EDUCATION**

## **High School Diploma - Classical Studies**

Jul 2002

Liceo Classico "E. Q. Visconti"

Piazza del Collegio Romano, 4 – 00186, Rome, Italy

Vote: 89/100

# **School of Medicine – Doctor of Medicine**

27 Jan 2012

S.C.D.U. Nuclear Medicine U – Chief Prof. R. Massa

A.O.U. "Umberto I di Roma" - University of Rome "La Sapienza" - Rome, Italy

- Thesis Title: "Role of Cardiac <sup>123</sup>I-MIBG Scintigraphy for the evaluation of patients affected by movement disorder."
- Advisor: Prof. R. Massa and Prof. G. De Vincentis
- Vote: 110/110 cum laude

## License to practice Medicine and Surgery

Jul 2012

Clinical training: University of Rome "La Sapienza" - Rome, Italy

# MD Board Certification for the city of Rome – Italy

26 Jul 2012 - 15 May 2017

"Albo dei Medici e Chirurghi di Roma"

Number of registration: 59689

## MD Board Certification for the city of Turin – Italy

15 May 2017 - Present

"Albo dei Medici e Chirurghi di Torino"

Number of registration: 24131

## **Certificate of "Advanced Cardiovascular Life Support Course" (ACLS)**

6 Feb 2018

"America Heart Association" (AHA) and "Società Italiana di Medicina d'Emergenza e Urgenza" (SIMEU) A.O.U. "Città della Salute e della Scienza" - Turin – Italy

Certificate Number: f8aaff6c80be

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### **Board certified in Nuclear Medicine**

26 Jul 2018

S.C.D.U. Nuclear Medicine U- Chief Prof. G. Bisi

A.O.U. "Città della Salute e della Scienza" - University of Turin "UNITO" - Turin, Italy

- Thesis Title: "Preliminary study of heterogeneity on neuroendocrine tumors on PET/CT with 68 Ga-DOTATOC: a potential prognostic aid."
- Advisor: Prof. G. Bisi and Prof. D. Deandreis
- Vote: 70/70 cum laude

## **CURRENT POSITION**

## PhD Programe in Medical Physiopathology

1 Nov 2019 - Present

Department of Medical Science - Chief Prof. F. Veglio

A.O.U. "Città della Salute e della Scienza" - University of Turin "UNITO" - Turin, Italy

Project: "Radiomics in Nuclear Medicine and hybrid imaging for heterogeneity of solid tumors: diagnostic and prognostic potential" - Tutor: Prof. D. Deandreis (Chair of Nuclear Medicine Unit)

## **Attending Nuclear Medicine Physician (permanent position)**

9 June 2021 - Present

Department of Nuclear Medicine - Chief Dr. A. Papaleo

Nuclear Medicine Department, S. Croce e Carle Hospital, Cuneo, Italy

# PROFESSIONAL EXPERIENCE

# Radiology - Undergraduate Training

Mar 2007

Position: Student

A.O.U. "Umberto I di Roma" - University of Rome "La Sapienza" - Rome, Italy

Prof. R. Passariello

# **Gastroenterology - Undergraduate Training**

Apr 2007

Position: Student

A.O.U. "Umberto I di Roma" - University of Rome "La Sapienza" - Rome, Italy

Prof. M. Merli

# **Endocrinology - Undergraduate Training**

*May 2007* 

Position: Student

A.O.U. "Umberto I di Roma" - University of Rome "La Sapienza" - Rome, Italy

Prof. V. Bonifacio

# **Day Surgery - Undergraduate Training**

*Sep 2007 – Dec 2007* 

Position: Student

A.O.U. "Umberto I di Roma" - University of Rome "La Sapienza" - Rome, Italy

Prof. P. Palumbo

## IFMSA-NL Winter School 2007-2008 – "Organ Transplantation"

30 Dec 2007 - 5 Jan 2008

EMSA and Universiteit Leiden – Leiden, Netherlands

## **Internal Medicine - Undergraduate Training**

*Mar* 2008 – *Dec* 2008

Position: Student

A.O.U. "Umberto I di Roma" - University of Rome "La Sapienza" - Rome, Italy

Prof. A. Amoroso

# **Nuclear Medicine - Undergraduate Training**

Feb 2009 – Jan 2012

Position: Student

A.O.U. "Umberto I di Roma" - University of Rome "La Sapienza" - Rome, Italy

Prof. R. Massa

# **Emergency Department Medical Internship**

Mar 2012 - Mar 2013

Position: MD Volounteeering A.O.U. "Martini" - Turin, Italy

Chief M. Garrone

# **Nuclear Medicine – MD Internship**

Oct 2012 – Apr 2013

Position: MD fellowship

S.C.D.U. Nuclear Medicine U- Chief Prof. G. Bisi

A.O.U. "Città della Salute e della Scienza" - University of Turin "UNITO" - Turin, Italy

# Nuclear Medicine – Residency Internship

Oct 2014 – Jan 2015

Position: residency trainee

S.C.D.U. Nuclear Medicine - Chief Prof. V. Podio

A.O.U. "San Luigi Gonzaga" - University of Turin "UNITO" - Orbassano (TO), Italy

# Nuclear Medicine – Residency Internship

Feb 2018 – Apr 2018

Position: residency trainee

S.C.D.U. Nuclear Medicine – Chief Dr. E. Pellerito

A.O.U. "Mauriziano Umberto I" - Turin, Italy

# Nuclear Medicine – Residency Internship

Aug 2013 – Aug 2018

Position: residency trainee

S.C.D.U. Nuclear Medicine U- Chief Prof. G. Bisi

A.O.U. "Città della Salute e della Scienza" - University of Turin "UNITO" - Turin, Italy

### ESMIT/EANM Winter School

23-25 Feb 2018

## Cardiovascular Track (Circle 1) and Oncology Track (Circle 2)

University of Bergamo - Bergamo, Italy

# Trialect sponsored Nuclear Medicine Hybrid Methods and Theranostics Traineeship

Aug 2018

Position: Visiting Postgraduate Fellowship

Department of Nuclear Medicine - University Hospital of Aachen

Uniklinik RWTH – Aachen, Germany

Chief Prof. F. M. Mottaghy

# Research Fellowship at University of Turin, Italy

Feb 2019 – Apr 2019

Project "Clinical impact of 68Ga DOTATOC PET/CT in neuroendocrine tumors: a radiomic approach"

Division of Nuclear Medicine, Turin, Italy

### Doctor on duty (Servizio di Continuità Assistenziale ASL Biella)

Oct 2018 – Apr 2019

Ente pubblico ASL di Biella – Mongrando - Italy

ufficio.protocollo@cert.aslbi.piemonte.it

## The ENETS CoE Training Fellowship 2019

*May 2019 - Aug 2019* 

Department of Nuclear Medicine - University Hospital of Zurich - Zurich, Switzerland Chief Prof. P. A. Kaufmann

# Doctor on duty (Servizio di Continuità Assistenziale ASL TO4)

*Nov 2019 – Dec 2019* 

Ente pubblico ASL TO4 – Leinì - Italy direzione.generale@pec.aslto4.piemonte.it

## Researcher in Nuclear Medical

*Sept 2020 – Nov 2020* 

Department of Nuclear Medicine - University Hospital of Zurich - Zurich, Switzerland Chief Prof. P. A. Kaufmann

## **Attending Nuclear Medicine Physician (temporary position)**

*April* 2021 – May 2021

Research project on "Radiomic in Lung Cancer based on PET images" Nuclear Medicine, Central Hospital Bolzano, 39100 Bolzano, Italy Chief Dr. M. Farsad

### **RESEARCH PAPERS**

### **PAPERS PUBLISHES:**

- Balma M. et al. *The role of the ragnostics in breast cancer: a systematic review of the last 12 years. In press*
- Liberini V. et al. *Radiomics and artificial intelligence in prostate cancer: new tools for molecular hybrid imaging and theragnostics*. Eur Radiol Exp. 2022 Jun 15;6(1):27. doi: 10.1186/s41747-022-00282-0. PMID: 35701671; PMCID: PMC9198151.
- Ceci F. et al. *Event-free survival after 68 Ga-PSMA-11 PET/CT in recurrent hormone-sensitive prostate cancer (HSPC) patients eligible for salvage therapy.* Eur J Nucl Med Mol Imaging. 2022 Jul;49(9):3257-3268. doi: 10.1007/s00259-022-05741-9. Epub 2022 Feb 26. PMID: 35217883; PMCID: PMC9250462.
- Balma M. et al. *Non-conventional and Investigational PET Radiotracers for Breast Cancer: A Systematic Review.* Front Med (Lausanne). 2022 Apr 12;9:881551. doi: 10.3389/fmed.2022.881551. PMID: 35492341; PMCID: PMC9039137.
- Thuillier P. et al. *Prognostic value of whole-body PET volumetric parameters extracted from* **68Ga-DOTATOC-PET/CT in well-differentiated neuroendocrine tumors.** J Nucl Med. 2022 Jul;63(7):1014-1020. doi: 10.2967/jnumed.121.262652. Epub 2021 Nov 5. PMID: 34740949.
- Husmann L. et al. *Staging of Alveolar Echinococcosis with PET/CT: Prediction of Benzimidazole Therapy Duration in Inoperable Patients.* Sci Rep. 2022 Jul 6;12(1):11392. doi: 10.1038/s41598-022-15641-5. PMID: 35794149; PMCID: PMC9259695.
- Liberini V. et al. *Predictive value of baseline* [18F]FDG PET/CT for response to systemic therapy in patients with advanced melanoma. J Clin Med. 2021 Oct 27;10(21):4994. doi: 10.3390/jcm10214994. PMID: 34768517; PMCID: PMC8584809.

- Liberini V. et al. *BSREM for brain metastases detection with [18F]FDG PET/CT in lung cancer patients.* J Digit Imaging. 2022 Jun;35(3):581-593. doi: 10.1007/s10278-021-00570-y. Epub 2022 Feb 25. PMID: 35212859; PMCID: PMC9156589.
- Liberini V. et al. *Histopathological Features of Parathyroid Adenoma and [18F]F-Choline Uptake in PET/MR of Primary Hyperparathyroidism.* Clin Nucl Med. 2022 Feb 1;47(2):101-107. doi: 10.1097/RLU.000000000003987. PMID: 35006103.
- Liberini V. et al. *NSCLC Biomarkers to Predict Response to Immunotherapy with Checkpoint Inhibitors (ICI): From the Cells to In Vivo Images.* Cancers (Basel). 2021 Sep 10;13(18):4543. doi: 10.3390/cancers13184543. PMID: 34572771; PMCID: PMC8464855.
- Messerli M. et al. *Clinical evaluation of data-driven respiratory gating for PET/CT in an oncological cohort of 149 patients: impact on image quality and patient management.* Br J Radiol. 2021 Oct 1;94(1126):20201350. doi: 10.1259/bjr.20201350. Epub 2021 Sep 14. PMID: 34520673.
- Liberini V. et al. *Improved detection of in-transit metastases of malignant melanoma with BSREM reconstruction in digital [ 18 FJFDG PET/CT.* Eur Radiol. 2021 Oct;31(10):8011-8020. doi: 10.1007/s00330-021-07852-7. Epub 2021 Mar 25. PMID: 33768288.
- Liberini V. et al. *The Future of Cancer Diagnosis, Treatment and Surveillance: A Systemic Review on Immunotherapy and Immuno-PET Radiotracers.* Molecules. 2021 Apr 11;26(8):2201. doi: 10.3390/molecules26082201. PMID: 33920423; PMCID: PMC8069316.
- Thuillier P. et al. *Diagnostic value of both conventional PET parameters and radiomic features extracted from* <sup>18</sup>*F-FDG PET/CT for histologic subtype classification and characterization of lung neuroendocrine neoplasms.* Biomedicines. 2021 Mar 10;9(3):281. doi: 10.3390/biomedicines9030281. PMID: 33801987; PMCID: PMC8001140.
- Liberini V. et al. *COVID-19 and Aspiration Pneumonia: Similar Pulmonary Findings with Different Diagnoses-a Pitfall in [18F]FDG PET/CT.* SN Compr Clin Med. 2021 Jul 29:1-4. doi: 10.1007/s42399-021-01030-y. Epub ahead of print. PMID: 34345767; PMCID: PMC8321507.
- Liberini V. et al. *The Challenge of Evaluating Response to Peptide Receptor Radionuclide Therapy in Gastroenteropancreatic Neuroendocrine Tumors: The Present and the Future.* Diagnostics (Basel). 2020 Dec 12;10(12):1083. doi: 10.3390/diagnostics10121083.
- Liberini V. et al. *Impact of segmentation and discretization on radiomic features in 68Ga-DOTA-TOC PET/CT images of neuroendocrine tumor.* EJNMMI Phys. 2021 Feb 27;8(1):21. doi: 10.1186/s40658-021-00367-6. PMID: 33638729; PMCID: PMC7914329.
- Liberini V. et al. <sup>68</sup>Ga-DOTATOC PET/CT based radiomic analysis and PRRT outcome: a preliminary evaluation based on an exploratory radiomic analysis. Front Med (Lausanne). 2021 Jan 26;7:601853. doi: 10.3389/fmed.2020.601853.
- Liberini V. et al. *Impact of PET data driven respiratory motion correction of* <sup>68</sup>*Ga-DOTATATE PET/CT for differentiating neuroendocrine tumors (NET) and intrapancreatic accessory spleens (IPAS).* Sci Rep 11, 2273 (2021). https://doi.org/10.1038/s41598-020-80855-4

- Nervo A. et al. *Bone metastases from differentiated thyroid carcinoma: current knowledge and open issues.* J Endocrinol Invest. 2020 Aug 3. doi: 10.1007/s40618-020-01374-7.
- Polverari G. et al. <sup>18</sup>F-FDG PET/CT Parameters and Radiomics Features Analysis in Advanced NSCLC treated with Immunotherapy as Predictors of Therapy Response and Survival. Cancers 2020, 12, 1163; doi:10.3390/cancers12051163.
- Finessi M. et al. *Major limits of dosimetrically determined activities in advanced differentiated thyroid carcinoma*. Q J Nucl Med Mol Imaging. 2019 Sep; 63 (3): 258-266. doi: 10.23736/S1824-4785.19.03211-4.
- Liberini V. et al. <sup>68</sup>Ga-DOTA-TOC PET/CT: a typical case of von Hippel-Lindau disease. Clin Nucl Med. 2019 Feb; 44 (2): 125-126. doi: 10.1097/RLU.000000000002395.
- I. Motta et al. *Undetectable antimicrobial plasma concentrations in an HIV-positive patient with protein-losing enteropathy and chylothorax during Mycobacterium genavense and Leishmania abdominal infections*. J. Antimicrob Chemother, 2018 Feb 1;73(2):546-548. doi: 10.1093/jac/dkx385.

### **ABSTRACT PUBLISHES:**

- Liberini V. et al. *Development of 3D-printed inserts for NEMA-phantom simulating necrotic tumor lesions for the evaluation of reproducibility of PET/CT radiomic features* Abstracts book of the Annual Congress of the European Association of Nuclear Medicine EAMN Annual Congress 2022 TROP (Top Rated Oral Presentation) Session: Radiomics Oral Presentation. Annual Congress of the European Association of Nuclear Medicine October 15-19, 2022 Barcelona, Spain. Eur J Nucl Med Mol Imaging 49 (Suppl 1), 1–751 (2022). https://doi.org/10.1007/s00259-022-05924-4
- Albano D. et al. [18F]FDG PET/CT role in FUO: an Italian multicentric study Abstracts book of the Annual Congress of the European Association of Nuclear Medicine EAMN Annual Congress 2022. Annual Congress of the European Association of Nuclear Medicine October 15-19, 2022 Barcelona, Spain. Eur J Nucl Med Mol Imaging 49 (Suppl 1), 1–751 (2022). <a href="https://doi.org/10.1007/s00259-022-05924-4">https://doi.org/10.1007/s00259-022-05924-4</a>
- Evangelista L. et al. *ITA-IMMUNO-PET: The Role Of FDG PET/CT In The Evaluation Of Response To Immunotherapy In Patient (PTS) With Lung Cancer (LG) And Malignant Melanoma (MM)*. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine EAMN Annual Congress 2022. Annual Congress of the European Association of Nuclear Medicine October 15-19, 2022 Barcelona, Spain. Eur J Nucl Med Mol Imaging 49 (Suppl 1), 1–751 (2022). <a href="https://doi.org/10.1007/s00259-022-05924-4">https://doi.org/10.1007/s00259-022-05924-4</a>
- Albano D. et al. *18F-FDG PET/CT role in FUO: an Italian Multicentric Study*. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- Balma M. et al. *Interobserver agreement of [18F]PSMA-1007 PET/CT imagesaccording to the E-PSMA criteria in prostate cancer (PCA)patients with biochemical recurrence after primary surgery*. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x

- Nicolotti D.G. et al. [18F]PSMA-1007 PET/CT impact on decision-making strategies for prostate cancer patients with biochemical recurrence at lowPSA values after primary surgery: a retrospective preliminary evaluation. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- Buschiazzo A. et al. *Monitoring treated brain neoplasms patients with 11C-MET PET and MRI: a retrospective sampling of discrepancies in evaluating treatment response or identifying focal relapse*. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- Evangelista L. et al. *ITA-IMMUNO-PET:* comparison between CT and FDG PET/CTin the evaluation of response to immunotherapy and their impacton the prognosis. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- Bianchi A. et al. *ITA-IMMUNO-PET: suspected adverse events correlatedto immunotherapy assessed by FDG PET/CT*. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- Evangelista L. et al. *ITA-IMMUNO-PET: the prognostic role of baseline FDG PET/CT in patients candidates to immunotherapy*. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- De Rimini M.L. et al. *ITA-IMMUNO-PET: the role of FDG PET/CT in the evaluation of response to immunotherapy*. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- Laudicella R. et al. [68GA]DOTATOC PET/CT machine-learning applications in the prediction of response in GEP-NETS undergoing[177LU]DOTATOC PRRT: the "THERAGNOMICS" concept. 15th National Congress of the Italian Association of Nuclear Medicine and Molecular Imaging (AIMN). Clin Transl Imaging 10 (Suppl 1), 1–111 (2022). https://doi.org/10.1007/s40336-022-00492-x
- Liberini V. et al. *Interobserver agreement for [18F]F-PSMA-1007 PET/CT images according to the E-PSMA criteria in prostate cancer patients.* Journal of Nuclear Medicine. Vol. 63, Issue supplement 2. June 1, 2022
- Laudicella R. et al. [68GA]DOTATOC PET/CT machine-learning applications in the prediction of response in GEP-NETS undergoing[177LU]DOTATOC PRRT: the "THERAGNOMICS" concept. Journal of Nuclear Medicine. Vol. 63, Issue supplement 2. June 1, 2022
- Ceci F. et al. *A0200 Event-Free survival after 68Ga-PSMA-11 PET/CT in recurrent Hormone-Sensitive Prostate Cancer (HSPC) patients eligible for salvage therapy*. European Urology, Volume 81, Supplement 1, 2022, Page S312, ISSN 0302-2838, https://doi.org/10.1016/S0302-2838(22)00287-1

- Liberini V. et al. *Parathyroid Histopathology and [18F]F-Choline Uptake in PET/MR in Primary Hyperparathyroidism*. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine EAMN Annual Congress 2021 TROP (Top Rated Oral Presentation) Session: Nuclear Medicine Imaging and Therapy in Thyroid and Parathyroid Disorders. European Association of Nuclear Medicine October 20-23, 2021 Virtual. Eur J Nucl Med Mol Imaging 48 (Suppl 1), 1–648 (2021). https://doi.org/10.1007/s00259-021-05547-1
- Thuillier P. et al. *Prognostic value of whole-body PET volumetric parameters extracted from 68Ga-DOTATOC-PET/CT in well-differentiated neuroendocrine tumors.* Abstracts book of the Annual Congress of the European Association of Nuclear Medicine EAMN Annual Congress 2021 Clinical Oncology Track TROP (Top Rated Oral Presentation) Session: Neuroendocrine- Oral Presentation. European Association of Nuclear Medicine October 20-23, 2021 Virtual. Eur J Nucl Med Mol Imaging 48 (Suppl 1), 1–648 (2021). https://doi.org/10.1007/s00259-021-05547-1
- Liberini V. et al. *Predictive value of baseline [18F]FDG PET/CT for response to systemic therapy in patients with advanced melanomas.* Abstracts book of the Annual Congress of the European Association of Nuclear Medicine EAMN Annual Congress 2021 Clinical Oncology Track TROP (Top Rated Oral Presentation) Session: Gynaecological and Melanoma Oral Presentation. European Association of Nuclear Medicine October 20-23, 2021 Virtual. Eur J Nucl Med Mol Imaging 48 (Suppl 1), 1–648 (2021). https://doi.org/10.1007/s00259-021-05547-1
- Liberini V. et al. *BSREM for Brain Metastases Detection with [18F]FDG PET/CT in Lung Cancer Patients.* Abstracts book of the Annual Congress of the European Association of Nuclear Medicine EAMN Annual Congress 2021 Cutting Edge Science Track Featured Session: PET Reconstructions and Corrections Oral presentation. European Association of Nuclear Medicine October 20-23, 2021 Virtual. Eur J Nucl Med Mol Imaging 48 (Suppl 1), 1–648 (2021). https://doi.org/10.1007/s00259-021-05547-1
- Thuillier P. et al. *Valeur pronostique des paramètres volumétriques corps entier extraits de la TEP/TDM au 68Ga-DOTATOC dans les tumeurs neuroendocrines bien différenciées.* Annales d'Endocrinologie, Volume 82, Issue 5, 2021, Page 274, ISSN 0003-4266, <a href="https://doi.org/10.1016/j.ando.2021.08.056">https://doi.org/10.1016/j.ando.2021.08.056</a>.
- Thuillier P. et al. Valeur prédictive des paramètres volumétriques corps entier et osseux de la 18F-FDG-TEP/TDM préthérapeutique dans la réponse au Lenvatinib chez les patients traités pour un cancer différencié de la thyroïde réfractaire à l'iode. Annales d'Endocrinologie, Volume 81, Issue 4, 2020, Page 251, ISSN 0003-4266, https://doi.org/10.1016/j.ando.2020.07.293.
- Liberini V. et al. *Impact of PET data driven respiratory motion correction of* <sup>68</sup> *Ga-DOTATATE PET/CT for differentiating neuroendocrine tumors (NET) and intrapancreatic accessory spleens (IPAS).* EJNMMI. September 2020; vol 47 (suppl 1): 1-753. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine Oral presentation.
- Polverari G. et al. <sup>18</sup>F-FDG PET Parameters and Radiomics Features Analysis in Advanced NSCLC treated with Immunotherapy as Predictors of Therapy Response and Survival. EJNMMI. September 2020; vol 47 (suppl 1): 1-753. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine Oral presentation.
- Califaretti E. et al. <sup>18</sup>F-FDG PET/CT whole body volumetric evaluation in iodine-refractory differentiated thyroid cancer as predictors of Lenvatinib response. EJNMMI. September 2020; vol

- 47 (suppl 1): 1-753. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine Oral presentation.
- Liberini V. et al. *Peptide Receptor Radionuclide Therapy (PRRT) Putcome Prediction in Neuroendocrine Tumors (NET): Could Radiomic Features Analysis of 68Ga-DOTATOC PET/CT Have a Roll?* Neuroendocrinology 2020. Vol. 110 (suppl 1). Abstracts of the 17<sup>th</sup> Annual ENETS Conference for the Diagnosis and Treatment of Neuroendocrine Tumor Disease.
- Liberini V. et al. *Robustness of Radiomic Features in 68Ga-DOTATOC PET/CT: A Monocentric Experience for Neuroendocrine Tumors*. Neuroendocrinology 2020. Vol. 110 (suppl 1). Abstracts of the 17<sup>th</sup> Annual ENETS Conference for the Diagnosis and Treatment of Neuroendocrine Tumor Disease.
- Liberini V. et al. *A Study of Radiomic Features Robustness for 68Ga-DOTATOC PET/CT in Neuroendocrine Tumors.* EJNMMI. October 2019; vol 46 (suppl 1): 1-952. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine Oral Presentation.
- Nicolotti D. et al. *Impact of late pelvic acquisition on 68Ga-PSMA-11 PET/CT positivity rate and inter-rter reliability analysis.* EJNMMI. October 2019; vol 46 (suppl 1): 1-952. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine.
- Ceci F. et al. 68Ga-PSMA-11 PET/CT in hormone-naïve recurrent prostate cancer: prospective, single-center study in patients eligible for salvage therapy. EJNMMI. October 2019; vol 46 (suppl 1): 1-952. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine.
- Ceci F. et al. Salvage radiotherapy guided by 68Ga-PSMA-11 PET/CT in patients with biochemical persistence (BCP) after radical prostatectomy for prostate cancer. EJNMMI. October 2019; vol 46 (suppl 1): 1-952. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine.
- Finessi M. et al. *Comparison of 68Ga DOTATOC PET/CT with morphological imaging in staging of neuroendocrine tumors*. EJNMMI. October 2019; vol 46 (suppl 1): 1-952. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine.
- Pilati E. et al. *Impact of 68Ga DOTATOC PET/CT in the Therapeutic Management of Neuroendocrine Tumors.* EJNMMI. October 2019; vol 46 (suppl 1): 1-952. Abstracts book of the Annual Congress of the European Association of Nuclear Medicine.
- Liberini V. et al. *Can texture analysis be used for a vivo "imaging biopsy" in neuroendocrine tumors?*A first step feasibility study with 68Ga-DOTATOC PET/CT. Neuroendocrinology 2019; 108 (suppl 1):

  I-X. Abstracts of the 16<sup>th</sup> Annual ENETS Conference for the Diagnosis and Treatment of Neuroendocrine Tumor Disease.
- Pilati E. et al. *Impact of 68Ga DOTATOC PET/CT in the therapeutic management of neuroendocrine tumors*. Clin Transl Imaging (2019), vol 7 (Supp 1): S1-S138. AIMN XIV Annual Congress Abstract.
- Liberini V. et al. *Can texture analysis be used for a vivo "imaging biopsy" in neuroendocrine tumors? A first step feasibility study with 68Ga-DOTATOC PET/CT*. Clin Transl Imaging (2019), vol 7 (Supp 1): S1-S138. AIMN XIV Annual Congress Abstract selected for highlight.

- Liberini V. et al. *A strange case of multiple fractures: a case report.* Clin Transl Imaging (2017), vol 5 (Suppl 1): S1–S153. AIMN XIII Annual Congress Abstract.
- Liberini V. et al. *The role of lymphoscintigraphy in the diagnosis of lymphocele after renal transplant: a case report*. Clin Transl Imaging (2017), vol 5 (Suppl 1): S1–S153. AIMN XIII Annual Congress Abstract.
- Balma M. et al. *The role of* <sup>123</sup>*I-FP- CIT SPECT in the study of the serotonergic system in amyotrophic lateral sclerosis: a potential aid in understanding etiopathogenesis*. Clin Transl Imaging (2017), vol 5 (Suppl 1): S1–S153. AIMN XIII Annual Congress Abstract.
- Galati A. et al. *FP- CIT gender differences. Removing the background to focus on the target*. Clin Transl Imaging (2017), vol 5 (Suppl 1): S1–S153. AIMN XIII Annual Congress Abstract.

### **BOOK PUBLISHES:**

- Liberini V., Finessi M. et Deandreis D. (2021) A Patient with Follicular Thyroid Cancer and a Painful Bone Metastases at Risk for Pathologic Fracture. *Chapter pp 275-295*. Thyroid Cancer. A case-based approach. II edition. Editors: Giorgio Grani, David S. Cooper, Cosimo Durante. Springer. https://doi.org/10.1007/978-3-030-61919-0\_31
- Finessi M., Liberini V. et Deandreis D. (2020) *Cancer staging with 18F-FDG PET/CT in hyperglycemic patients*. *Chapter pp 641-654*. Obesity and Diabetes. Editors: Faintuch J., Faintuch S. (eds) Springer, Cham. https://doi.org/10.1007/978-3-030-53370-0\_47

## **GRANTS**

- IFMSA-NL Winter School 2007-2008 "Organ Transplantation"
- ESMIT/EANM Winter School 2018
- Trialect sponsored Nuclear Medicine Hybrid Methods and Theranostics Traineeship 2018
- The ENETS CoE Training Fellowship 2019

#### TEACHING ACTIVITIES

### Teacher as collaborator of Prof. D. Deandreis

01-23 March 2021

Subject: RESEARCH 4 (Research Implementation)

Course title: [f007-c205] laurea spec. in scienze delle professioni sanitarie tecniche

diagnostics - in Turin)

Organiser: University of Turin (address: ateneo@pec.unito.it)

N. 10,00 teaching hours

https://diagnostiche.campusnet.unito.it/do/corsi.pl/Show? id=fqz8

- $1^{st}$   $4^{th}$  March 2013 "XI National Annual Congress Associazione Italiana di Medicina Nucleare ed Imaging Molecolare (AIMN)" Turin, Italy;
- 5<sup>th</sup> October 2013 "Management of the patient with heart failure: possible role of myocardial scintigraphy MIBG", Ospedale S. Croce, Cuneo, Italy;
- 26 <sup>th</sup> 27<sup>th</sup> February 2015 " Quantitative Tomographic SPECT and PET imaging for dosimetry at Voxel level in nuclear medical therapy", Rome, Italy;
- $16^{th}$   $19^{th}$  April 2015 "XII National Annual Congress Associazione Italiana di Medicina Nucleare ed Imaging Molecolare (AIMN)" Rimini, Italy;
- $28^{th}$  October 2015 "Improvement groups Field training" of Rete Oncologica del Piemonte e della Valle d'Aosta, Turin, Italy;
- 19<sup>th</sup> January 2016 " From the prostate project of Turin to the prostate cancer unit", Università degli studi di Turin, Italy;
- 22<sup>th</sup> April 2016 "Improvement groups Field training" of Rete Oncologica del Piemonte edella Valle d'Aosta, Turin, Italy;
- 10<sup>th</sup> May 2016 "Towards a standardization of the interpretation and reporting criteria of FDG-PET in lymphoma", Ospedale S. Croce di Cuneo, Italy;
- 6<sup>th</sup> 7<sup>th</sup> October 2016 "Multimodal and Integrated Imaging in Cardiology", GICN, Brescia, Italy;
- 4<sup>th</sup> November 2016 " Towards a standardization of the interpretation and reporting criteria of FDGPET in lung cancer", Ospedale s. Croce di Cuneo, Italy;
- 3<sup>th</sup> December 2016 "MIND and BRAIN 2016. The colour of the Amyloid" Museo del Tessuto di Prato, Italy;
- 1st April 2017 " Nuclear medical imaging in neurological diseases" Turin, Italy;
- 26<sup>th</sup> May 2017 "Amyloid PET: practical aspects for an appropriate use in the current context" Lilly Campus, Sesto Fiorentino, Italy;
- 13<sup>th</sup> June 2017 "3rd Milan NET Conference, a meeting among active italian tumor boards in neuroendocrine tumors"- Milan, Italy;
- 22th September 2017 "NET: network for innovation and development Third edition" Turin, Italy;
- 23<sup>th</sup> September 2017 "From clinical to cardiac imaging: analysis of anginal pain" Nuovo Ospedale di Biella, Biella, Italy;
- 7<sup>th</sup> October 2017 "Introduction to the SPECT / CT basic course" University of Turin, Turin, Italy;

- 28<sup>th</sup> October 2017 "Updates on Advanced Cardiology Imaging" ICS Maugeri Spa SB I.R.C.C.S., Veruno, Italy;
- 11<sup>th</sup> November 2017 "III Nuclear Medicine Day in Milan: the diagnostic-therapeutic strategies of patients with neuroendocrine cancer" IEO education, Milan, Italy;
- 7<sup>th</sup> 9<sup>th</sup> March 2018 "II UNITO-POLITO Conference Series in Cancer Imaging of Cancer Dynamics", Turin, Italy;
- 28<sup>th</sup> March 2018 "Disputes in the Management of Prostate Recurrent Carcinoma" Prof. P. Gontero, University of Turin, Turin, Italy;
- 5<sup>th</sup> April 2018 "PET and Radiotherapy in Hodgkin's Lymphoma" Ospedale S. Croce di Cuneo, Italy;
- 3<sup>th</sup> October 2018 "Il ruolo del radium 223 nella pratica clinica: esperienze a confronto" c/o University of Turin, Turin, Italy;
- 23<sup>th</sup> November 2018 "NETfix project. Correct diagnostic-therapeutic approach in neuroendocrine tumors" FORUM pro s.r.l., A.O.U. "San Luigi Gonzaga" University of Turin "UNITO" Orbassano (TO), Italy
- 30<sup>th</sup> November 2018 "NET: network for innovation and development fourth edition" Aretré, Turin, Italy;
- $6^{th}$   $8^{th}$  March 2019 "The  $16^{th}$  Annual ENETS conference for the diagnosis and the treatment of neuroendocrine tumor disease" ENETS, Barcelona, Spain;
- 11th March 2019 "RADIOMIC for the PERSON" MZ congressi srl, IEO education, Milan, Italy;
- 29<sup>th</sup> March 2019 "VII EDIZIONE Neoplasie Neuroendocrine EXPERT OPINION" Aula Magna Università degli Studi di Brescia Brescia, Italy.
- $12^{th}$   $16^{th}$  October 2019 "Annual Congress of the European Association of Nuclear Medicine EANM" Barcelona, Spain – Oral Presentation
- 6<sup>th</sup> December 2019 "Visit to the GE Healthcare laboratory of Eindhoven", Eindhoven, Netherlands.
- $22^{th}$   $30^{th}$  October 2020 "Annual Congress of the European Association of Nuclear Medicine EANM" Web conference -
- 14<sup>th</sup>-15<sup>th</sup> April 2021. AIMN Webinar "FDG-PET NEI LINFOMI: APPROPRIATEZZA, INTERPRETAZIONE E REFERTAZIONE"
- 27th-28th April 2021. AIMN Webinar "PET/MR nella pratica clinica"
- 11th May 2021. AIMN Webinar "PSMA-PET nel cancro della prostata"
- 21<sup>th</sup> June 2021. AIMN Webinar "THE POWER OF FUNCTIONAL THINKING Refertazione Amiloide"

- 24<sup>th</sup> June 2021. AIMN Webinar "THE POWER OF FUNCTIONAL THINKING Refertazione DAT-DOPA"
- 28<sup>th</sup> June 2021. AIMN Webinar "THE POWER OF FUNCTIONAL THINKING Refertazione FDG"
- 01<sup>th</sup> July 2021. AIMN Webinar "THE POWER OF FUNCTIONAL THINKING Refertazione FDG vs FET oncologica"
- 20<sup>th</sup> 23<sup>th</sup> October 2021 "Annual Congress of the European Association of Nuclear Medicine EANM" Web conference
- $12^{th}$   $15^{th}$  May 2022 "XV National Annual Congress Associazione Italiana di Medicina Nucleare ed Imaging Molecolare (AIMN)" Turin, Italy Conference speaker
- 1<sup>st</sup> 2<sup>nd</sup> April 2022 "ProsTIC Preceptorship 2022 Melbourne, Australia" Web conference
- $11^{\text{th}}$   $14^{\text{th}}$  June 2022 "SNMMI 2022 Annual Meeting. Vancouver, BC, Canada" Web conference

# **COURSES** (partecipant)

- 12<sup>th</sup> May 2007 "Theoretical-practical course on cutaneous suture techniques", Prof. N. Scuderi University of Rome "La Sapienza", Rome, Italy;
- 30<sup>th</sup> March 2012 "First aid course" Confederazione Nazionale S.O.S "Angeli del Soccorso" University of Rome "Roma tre", Rome, Italy;
- 7<sup>th</sup> 9<sup>th</sup> November 2013 "XV Update Course GICN 2013 Italian cardiology nuclear group", Assisi, Italy;
- 19<sup>th</sup> September 2017 FAD AIMN course "Radiopharmaceuticals: updates in the diagnostic and therapeutic fields";
- $19^{th}$  September 2017 FAD AIMN course "Imaging SPECT/CT";
- $28^{\text{th}}$   $30^{\text{th}}$  September 2017 "Basic course in Nuclear Medicine in Neurology" Intercontact Srl, Pesaro, Italy;
- 16<sup>th</sup> 18<sup>th</sup> November 2017 "XVII Update Course GICN 2017 Italian cardiology nuclear group " Bologna, Italy;
- 9th September 2018 FAD AIMN course "Clinical cases in diagnostics and therapy";
- 11<sup>th</sup> September 2018 FAD AIMN course "Clinical applications of PET/MR in oncology: prostate cancer and brain tumors with in-depth coverage in radiotherapy";

- 12<sup>th</sup> September 2018 FAD AIMN course "Therapy in Nuclear Medicine: management of the patient with differentiated thyroid carcinoma";
- 13<sup>th</sup> September 2018 FAD AIMN course "Therapy in Nuclear Medicine: liver tumors and tumors neuroendocrine";
- $6^{th}$   $8^{th}$  March 2019 "The postgraduate course at the  $16^{th}$  Annual ENETS conference for the diagnosis and treatment of neuroendocrine tumor disease" ENETS, Barcelona, Spain.
- 30<sup>th</sup> September 2019 D-day 2019 doctoral school Area Scienze della Vita e della Salute UNITO.
- 29<sup>th</sup> and 30<sup>th</sup> November 2019 "PRIME Masterclass in Neuroendocrine Tumors. A multidisciplinary Interactive Workshop" Budapest, Hungary.
- 9<sup>th</sup>, 11<sup>th</sup> and 13<sup>th</sup> Dic 2019 "Bibliography and bibliometrics like pros" (Second Edition) Doctoral School of the University of Turin UNITO Turin.
- 20<sup>th</sup> January 2020 "Teragnostica sfide di oggi e prospettive future" Turin, Italy.
- $30^{th}$  Jan  $01^{th}$  Feb 2020 "EANM FOCUS 3: Molecular Imaging and Theranostics in Neuroendocrine Tumours" EANM Athens, Greece.
- 21<sup>th</sup>, 23<sup>th</sup>, 28<sup>th</sup> and 30<sup>th</sup> Sept 2020 "Open Science and FAIR Data" Doctoral School of the University of Turin UNITO Turin.
- 31th March 2020 FAD AIMN course "Prostate cancer and the role of PSMA".
- $20^{\text{th}}$  Decembr 2020 FAD AIMN course "PET imaging in the era of precision medicine: assessing response to target therapies".
- $20^{\text{th}}$  Decembr 2020 FAD AIMN course "The Report in Nuclear Cardiology: the importance of communicating effectively".
- 20<sup>th</sup> Decembr 2020 FAD AIMN course "Role of nuclear medicine in infections/inflammations".
- 20<sup>th</sup> Decembr 2020 FAD AIMN course "Radiomics and Nuclear Medicine".
- 28<sup>th</sup> September 1<sup>st</sup> October 2022 "Basic course in Nuclear Medicine in Neurology" Intercontact Srl, Pesaro, Italy;

### **REARCH ACTIVITY**

# Physician Consultant for the Amyvid study "16E-AV-AVBE"

*May 2017* 

Avid Radiopharmaceuticals, Philadelphia (United States)
Project work: read 40 Amyvid scans and evaluate 12 clinical reports.

### **CLINICAL ACTIVITY**

As part of clinical practice, I acquired the following skills:

- Clinical applications in the field of PET/CT diagnostics of the following radiopharmaceuticals: <sup>18</sup>F-FDG, <sup>68</sup>Ga-PSMA, <sup>68</sup>Ga-DOTA-TOC;
- Clinical applications in the field of conventional nuclear medicine: Myocardial SPECT of stress perfusion and at rest, hepatic scintigraphy with <sup>99m</sup>Tc-MAA, scintigraphy of the salivary glands, thyroid and parathyroid scintigraphy, lymphoscintigraphy for sentinel nodule research, bone scintigraphy, perfusional pulmonary scintigraphy, cerebral tomoscintigraphy with receptor tracer (DATSCAN), renal scintigraphy with <sup>99m</sup>Tc-MAG-3 and <sup>99m</sup>Tc-DMSA, scintigraphy with autologous labeled leukocytes;
- Clinical applications in the field of radiometabolic therapy with <sup>131</sup>I in thyroid pathology, with <sup>223</sup>RaCl2 in the treatment of bone metastases from prostate cancer, Zevalin in non-Hodgkin's lymphoma (NHL);
- Labelling of leucocytes with  $^{99\mathrm{m}}\mathrm{Tc}\text{-HMPAO}$  and of Zevalin.

#### **OTHER SKILLS**

Computer Languages Microsoft Office Package, LIFEx soft, SPM

Languages Italian (Native), English (Fluent)

### REFERENCES

### Désirée Deandreis

Professor of Nuclear Medicine and Chair of the Division of Nuclear Medicine Department of Medical Sciences, University of Turin, AOU Città della Salute e della Scienza, Division of Nuclear Medicine, Turin, Italy.

#### Gianni Bisi

Professor, Department of Medical Sciences, University of Turin, AOU Città della Salute e della Scienza, Division of Nuclear Medicine, Turin, Italy.

### Martin W. Huellner

PD and Senior Attending Physicians of Nuclear Medicine Department of Nuclear Medicine - University Hospital of Zurich - Zurich, Switzerland Chair Prof. P. A. Kaufmann

### **Mohsen Farsad**

Chair of the Division of Nuclear Medicine Department, Central Hospital Bolzano, 39100 Bolzano, Italy

In fede, Virginia Liberini Pizgina Lilerini

Cuneo, 03-10-2022