

## Curriculum vitae

### **Clemens Spielvogel, PhD**

Junior Group Leader

*Division of Nuclear Medicine*

*Department of Biomedical Imaging and Image-guided Therapy*

*Medical University of Vienna, Vienna, Austria*



Visiting Postdoctoral Researcher | Erwin Schrödinger Fellow

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*Department of Medicine*

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### Academic Experience and Milestones

- 2026-2027 **Visiting Postdoctoral Fellow and Principal Investigator** (FWF Erwin Schroedinger Fellowship) at the Artificial Intelligence in Medicine Research Center (Department of Medicine) at Cedars-Sinai Medical Center (Los Angeles, USA), hosted by Prof. Piotr Slomka
- Since 2026 **Junior Group Leader** at the Medical University of Vienna (Division of Nuclear Medicine, Dept. for Biomed. Imaging and Image-guided Therapy)
- 2023-2026 **Postdoctoral Research Scientist** (institutionally funded) at the Medical University of Vienna (Division of Nuclear Medicine, Dept. for Biomed. Imaging and Image-guided Therapy) as independent scientist at the Department of Prof. Marcus Hacker
- 2019-2023 **Doctoral Researcher and Doctoral Studies (PhD)** at the Christian Doppler Laboratory for Applied Metabolomics of Prof. Alexander Haug (Dept. for Biomed. Imaging and Image-guided Therapy) and Prof. Lukas Kenner (Dept. for Pathology) at the Medical University of Vienna; Thesis title “Molecular disease characterization by application of artificial intelligence in nuclear medicine”, graded 1 (best grade)
- 2019-2022 **Lecturer** at the University of Applied Sciences Technikum Vienna, thesis supervisions and teaching courses related to artificial intelligence, machine learning and computer vision for the Bachelor Program ‘Computer Science’
- 2018-2018 **Scientific Machine Learning Engineer** in the group of Laszlo Papp, PhD (Center for Medical Physics and Biomedical Engineering) at the Medical University of Vienna
- 2016-2018 **Master of Science (MSc)** in Bioinformatics at the University of Applied Sciences Campus Vienna
- 2016-2016 **Scientific Software Consultant** at the University of Graz
- 2013-2016 **Bachelor of Science (BSc)** in Biomedicine and Biotechnology at the University of Veterinary Medicine Vienna

### Research Interest and Important Results

Main focus: Clinical applications of artificial intelligence in cardiovascular imaging and oncology

Techniques: Machine learning, vision-based deep learning, explainable artificial intelligence, statistical modeling, quantitative imaging markers, imaging / non-imaging data integration, cardiovascular imaging, single photon emission computed tomography (SPECT), positron emission tomography (PET), and computed tomography (CT)

Results: Artificial intelligence-driven quantitative molecular imaging and multi-omics integration to improve diagnosis, risk stratification, and treatment monitoring across oncology and cardiology; Establishment of clinically validated AI biomarkers for cardiac amyloidosis, immune-related adverse events, and cancer phenotyping, enabling reproducible, prognostically relevant imaging beyond visual assessment; Development and successful multicenter validation of an artificial intelligence-based opportunistic screening approach for cardiac amyloidosis

### Awards

- 2026 **Rückenwind Funding Bonus** of the Austrian Science Fund (FWF)
- 2025 **Researcher of the Month** of the Medical University of Vienna
- 2025 **General Sponsorship Award for Nuclear Medicine** of the Austrian Society for Nuclear Medicine and Theranostics (OGNT)
- 2024 **Dora-Brücke Teleky Award** of the Austrian College of Physicians and the Medical University of Vienna Alumni Club
- 2024 Society of Nuclear Medicine and Molecular Imaging (SNMMI) **Young Investigator Award**
- 2024 Society of Nuclear Medicine and Molecular Imaging (SNMMI) **2<sup>nd</sup> place Best Clinical Abstract**
- 2024 **Best Abstract Award** (Digital Cardiology) at the Annual Meeting of the Austrian Society for Cardiology
- 2024 **Carl Apstein Award** at the Cardiovascular Research Days
- 2023 **Research Platform for Medical Imaging** (formerly Medical Imaging Cluster) **Award** at the Annual Meeting of the Research Platform Medical Imaging (formerly Medical Imaging Cluster)

### Invited Presentations

- 2025 AttRISE (Stockholm, Sweden): “Artificial Intelligence for Improving the Clinical Management of Patients with Transthyretin Cardiac Amyloidosis”
- 2025 European School of Multimodality Imaging & Therapy (ESMIT) Course: Explainable Artificial Intelligence
- 2025 Austrian Society for Nuclear Medicine and Theranostics (OGNT) Annual Congress (Bad Ischl, Austria): “Artificial Intelligence in Diagnostic Medicine”
- 2025 Pfizer Symposium at the OGNT Annual Congress (Bad Ischl, Austria): “Challenges and Opportunities for Artificial Intelligence in the Nuclear Medicine-guided Diagnosis of Cardiac Amyloidosis”
- 2023 Austrian Society of Medical Physicists (OGMP) Annual Congress (Salzburg, Austria): “Artificial Intelligence in Nuclear Medicine”
- 2023 Biomedical Summer School Vienna (Vienna, Austria): “Cardiac Amyloidosis Screening using Artificial Intelligence in Medical Imaging”
- 2021 Postgraduate COMULIS Training School for Radiomics and AI in Molecular Imaging (Vienna, Austria): “Machine Learning Platforms and Model Validation”

2019 North German Society of Nuclear Medicine Annual Meeting (Hamburg, Germany): “The role of Radiomics in Nuclear Medicine”

### Teaching

- Since 2021 **Co-supervisions** in the **PhD** Programme Medical Imaging N094 and the Doctoral Programme Applied Medical Science N790 (Medical University of Vienna); successful completions:
- Dr. sci. med. Kilian Kluge: ‘Comparative Analyses of Plasma-Derived DNA Biomarkers and [<sup>68</sup>Ga]Ga PSMA-11 PET/CT Findings in Prostate Cancer Patients and Their Translational Implications’
  - Jing Ning, PhD: ‘Integrative insights into cancer: multimodal imaging and omics profiling’
- Since 2019 **Supervision** of 1 **Master’s** thesis, 3 **Bachelor’s** theses, and various **internships** of students at the Medical University of Vienna, Vienna University of Technology (TU Wien), Veterinary Medical University of Vienna and University of Applied Sciences Technikum Vienna
- Since 2025 **Course** “Interdisciplinary Research Project” (lecture series and practical seminar) at the Vienna University of Technology (TU Wien)
- Since 2024 Ongoing **professional development** in academic teaching and supervision, including Moodle-supported instruction, supervision of diploma and PhD students, legal aspects of supervision, and mentoring and motivational strategies
- Since 2023 Four **Courses** ‘Thesis Seminar - Computational Nuclear Medicine’ and ‘Journal Club - Computational Nuclear Medicine’, ‘Thesis Seminar - Molecular Imaging’, ‘Journal Club – Molecular Imaging’ at the Medical University of Vienna (PhD Programme N094)
- 2019-2022 Three **Courses** ‘Computer Vision’, ‘Introduction to Artificial Intelligence’, and ‘Machine Learning I’ at the University of Applied Sciences Technikum Vienna (Bachelor’s program ‘Computer Science’)

### Other Achievements

- Since 2025 **Associate Editor and Editorial Board Member** at the European Journal of Nuclear Medicine and Molecular Imaging (EJNMMI) Research
- Since 2025 **Committee member** of the Austrian Society for Nuclear Medicine’s (OGNT) committee for hybrid imaging
- Since 2023 **Chairing sessions** at scientific conferences including the European Nuclear Medicine Association (EANM) conference and the European Molecular Imaging Meeting (EMIM)
- Since 2020 **Reviewing** for various scientific journals, including European Heart Journal, npj Digital Medicine, Journal of Nuclear Medicine, Cell Reports Medicine, Med, The International Journal of Cardiovascular Imaging, Clinical and Translational Imaging, Journal of Cancer Research and Clinical Oncology, Physica Medica, EJNMMI Research, The EANM Journal, and Molecular Cancer
- 2025 **Organization of conferences:** including acquisition of sponsoring and lead of scientific committee of the symposium on “Multimodal Diagnosis of Transthyretin Cardiac Amyloidosis” (Sponsored by Pfizer and Hermes Medical Solutions)
- 2022-2023 **Professional program** completion: Medical Statistics, Stanford University
- 2021-2022 **Professional program** completion: Data Science, certified by IBM

2020-2025 **Co-authoring** of the European Nuclear Medicine (EANM) Guide 2020 and updated version in 2025

#### Funded Projects

**As sole Principal Investigator: FWF Erwin Schroedinger Fellowship Grant:** “AI-enabled SPECT/CT imaging for cardiac amyloidosis” (Abroad phase 2026-2027; Return phase 2027-2028) 169 780 EUR (~200 000 USD)

Provided by: Austrian Science Fund (FWF)

**As sole Principal Investigator: Contract Agreement:** “Markers for the detection of cardiac amyloidosis” (2025) 15 000 EUR (~18 000 USD)

Provided by: Pfizer

**As Sub-Investigator: Christian Doppler Laboratory (CDL)** for Applied Metabolomics (2019-2023) 160 000 EUR (~190 000 USD)

Provided by: Christian Doppler Society

#### Book Chapters

1. Transcriptomics in Atherosclerosis: Insights into gene regulatory networks in vascular pathology (10.1016/B978-0-443-33064-3.00017-7) 2026
2. European Nuclear Medicine Guide - update 2025: Artificial Intelligence, Machine-, Deep Learning and Radiomics (10.52717/TDVK9247) 2025
3. Advanced Imaging and Therapy in Neuro-Oncology: Incremental Role of Radiomics and Artificial Intelligence (10.1007/978-3-031-59341-3\_10) 2024
4. European Nuclear Medicine Guide 2020: Artificial Intelligence, Machine-, Deep Learning and Radiomics (10.52717/XYLY1587) 2020

#### Conference publications and abstracts

As first author: >14

As other author: >41

For details please visit [https://scholar.google.com/citations?user=clemens\\_spielvogel](https://scholar.google.com/citations?user=clemens_spielvogel)

#### Peer-reviewed Publications

*First or last authorships are **underlined** and listed first. Preprints (>5) are not listed.*

1. Impact of disease-modifying therapy on [99mTc]Tc-DPD SPECT/CT markers in transthyretin cardiac amyloidosis enabled by artificial intelligence; **CP Spielvogel**, M Köfler, Z Jiang, J Ning, J Yu, D Haberl, C Kronberger, M Poledniczek, M Schmid, D Kersting, N Ermolaev, R Badr Eslam, M Auer-Grumbach, C Binder, F Duca, C Nitsche, J Kastner, J Bergler-Klein, AA Kammerlander, C Hengstenberg, M Hacker, R Calabretta and R Rettl; European Journal of Nuclear Medicine and Molecular Imaging 2025
2. Generative artificial intelligence enables medical image generation and improves generalization of machine learning models in data-constrained environments; D Haberl, J Ning, K Kluge, K Kumpf, J Yu, Z Jiang, CS Constantino, A Monaci, M Starace, AR Haug, R Calabretta, L Camoni, F Bertagna, K Mascherbauer, F Hofer, D Albano, R Sciagra, FPM Oliveira, D Costa, C Nitsche, M Hacker and **CP Spielvogel**; European Journal of Nuclear Medicine and Molecular Imaging 2025

3. A machine learning approach to identify patients at risk for long-term consequences after pulmonary embolism; 2025  
S Nopp\*, **CP Spielvogel\***, B Bikdeli, A Alberich-Conesa, L Hernandez-Blasco, L Peris, R Otero, D Jimenez, M Monreal, C Ay and the RIETE Investigators; Scientific Reports
4. Enhancing Blood–Brain Barrier Penetration Prediction by Machine Learning-Based Integration of Novel and Existing, In Silico and Experimental Molecular Parameters from a Standardized Database; **CP Spielvogel\***, N Schindler\*, C Schröder, SL Stellnberger, W Wadsak, M Mitterhauser, L Papp, V Pichler and C Vraka; Journal of Chemical Information and Modeling 2025
5. Artificial intelligence-enabled opportunistic identification of immune checkpoint inhibitor-related adverse events using [18F]FDG PET/CT; **CP Spielvogel**, A Lazarevic, L Zisser, D Haberl, C Eseroglou, L Beer, M Hacker and R Calabretta; European Journal of Nuclear Medicine and Molecular Imaging 2025
6. Enhanced diagnostic and prognostic assessment of cardiac amyloidosis using combined 11C-PIB PET/CT and 99mTc-DPD scintigraphy; H Zhihui\*, **CP Spielvogel\***, S Xue, R Calabretta, Z Jiang, J Yu, K Kluge, D Haberl, C Nitsche, S Grünert, M Hacker and X Li; European Journal of Nuclear Medicine and Molecular Imaging 2025
7. A novel assessment of whole-mount Gleason grading in prostate cancer to identify candidates for radical prostatectomy: a machine learning-based multiomics study; J Ning\*, **CP Spielvogel\***, D Haberl, K Trachtova, S Stoiber, S Rasul, V Bystry, G Wasinger, P Baltzer, E Gurbhofer, G Timelthaler, M Schleder, L Papp, H Schachner, T Helbuch, M Hartenbach, B Grubmüller, SF Shariat, M Hacker, A Haug and L Kenner; Theranostics 2024
8. Diagnosis and prognosis of abnormal cardiac scintigraphy uptake at risk for cardiac amyloidosis using artificial intelligence: An international, multi-center, cross-tracer development and validation study; **CP Spielvogel\***, D Haberl\*, K Mascherbauer, J Ning, K Kluge, T Traub-Weidinger, RH Davies, I Pierce, K Patel, T Nakuz, A Göllner, D Amereller, M Starace, A Monaci, M Weber, X Li, AR Haug, R Calabretta, X Ma, M Zhao, J Mascherbauer, A Kammerlander, C Hengstenberg, LJ Menezes, R Sciagra, TA Treibel, M Hacker and C Nitsche; The Lancet Digital Health 2024
9. Preoperative detection of extraprostatic tumor extension in patients with primary prostate cancer utilizing [68Ga]Ga-PSMA-11 PET/MRI; **CP Spielvogel\***, J Ning\*, K Kluge, D Haberl, G Wasinger, J Yu, H Einspieler, L Papp, B Grubmüller, SF Shariat, PAT Baltzer, P Clauser, M Hartenbach, L Kenner, M Hacker, AR Haug\* and S Rasul\*; Insights into Imaging 2024
10. Radiogenomic markers enable risk stratification and inference of mutational pathway states in head and neck cancer; **CP Spielvogel**, S Stoiber, L Papp, D Krajnc, M Grahovac, E Gurnhofer, K Trachtova, V Bystry, A Leisser, B Jank, J Schnoell, L Kadletz, G Heiduschka, T Beyer, M Hacker, L Kenner\* and A R Haug\*; European Journal of Nuclear Medicine and Molecular Imaging 2022
11. Quantitative Assessment of Myocardial Infarction Scarring using Optical Coherence Tomography: towards data-driven Catheter Therapy Guidance; A Krause, G Giardina, CP Spielvogel, D Haberl, L Papp and RD Walton; IEEE Transactions on Biomedical Engineering 2026
12. Positron Emission Tomography/Computed Tomography Imaging with [18F]PARPi for Precision Guidance of Poly ADP-ribose Polymerase Inhibitor Therapy in Homologous Recombination Repair Mutated and Nonmutated Metastatic Castration-resistant Prostate Cancer; H Ofnera, H Einspieler, M Ozenilc, CP Spielvogel, I Kristiana Langratec, K Bammingerc, MR Hasslera, PAT Baltzer, SF Shariata, M Hacker, Sazan Rasul and Gero Kramer; European Urology Oncology 2026

13. Feasibility of [68Ga]Ga-FAPI PET Molecular Imaging in Atherosclerosis Compared with [18F]FDG in Oncological Patients; R Calabretta, E Atli, BK Geist, D Muin, L Zisser, **CP Spielvogel**, C Falkenbach, E Kretschmer-Chott, Stefan Schmitl, J Bergler-Klein, X Li, P Binder and M Hacker; Diagnostics 2025
14. Additive diagnostic value of thoracic SPECT/CT imaging in perugini grade 1 patients who underwent bone scintigraphy; M Poledniczek, Rene Rettl, C Kronberger, M Schmid, N Ermolaev, F Duca, C Nitsche, C Binder, LC Ligios, M Eslami, P Binder, **CP Spielvogel**, RB Eslam, D Beitzke, J Kastner, J Bergler-Klein, AA Kammerlander, C Hengstenberg, M Hacker and R Calabretta; European Journal of Nuclear Medicine and Molecular Imaging 2025
15. Thyroid hormone receptor beta signaling is a targetable driver of prostate cancer growth; Fesiuk A, D Pölöske, E Araujo, G Frere, TB Wright, G Tin, YS Raouf, OO Oloaye, JS Park, N Blavet, B Tichy, M Schlederer, S Högler, M Wolf, C Philippe, O Aksoy, A Varady, A Medaglia-Mata, M Varenicja, B Szabo, T Weiss, G Wasinger, T Redmer, HA Neubauer, M Susani, **CP Spielvogel**, J Ning, Maik Dahlhoff, M Schepelmann, RD Kennedy, R Moriggl, G Brown, J Persson, C Gerner, V Bystry, O Holloczki, DM Heery, PT Gunning, O Merkel, Brigitte Hantusch and L Kenner; Molecular Cancer 2025
16. Impact of Regularization in Optimizing Distance-Encoding Biomorphic-Informational Neural Networks for Small Nuclear Medicine Datasets; B Ecsedi, A Boukhari, **CP Spielvogel**, D Haberl, Z Ritter, RA Bundschuh, C Lapa, M Hacker, M Hatt and L Papp; EANM Innovation 2025
17. Spatial imaging features derived from SUVmax location in resectable NSCLC are associated with tumor aggressiveness; Z Jiang, **CP Spielvogel**, D Haberl, J Yu, M Krisch, S Szakall, P Molnar, J Fillinger, L Horvath, F Renyi-Vamos, C Aigner, B Dome, C Lang, Z Megyesfalvi, L Kenner and M Hacker; European Journal of Nuclear Medicine and Molecular Imaging 2025
18. Using 18F-FDG PET/CT-derived body composition features to predict lymphovascular invasion in non-small cell lung cancer; Z Jiang, D Haberl, **CP Spielvogel**, S Szakall, P Molnar, J Yu, V Lungu, J Fillinger, F Renyi-Vamos, C Aigner, B Dome, C Lang, L Kenner, Z Megyesfalvi and M Hacker; European Journal of Nuclear Medicine and Molecular Imaging 2025
19. Does PARP1 up-regulation correlate with PSMA expression in patients with metastatic castration-resistant prostate cancer studied with [F]PARPi and [Ga]PSMA PET/CT?; H Einspieler\*, H Ofner\*, M Ozenil, **CP Spielvogel**, IK Langrate, MR Hassler, L Nics, K Bamminger, PAT Baltzer, SF Shariat, M Hacker, G Kramer and S Rasul; European Journal of Nuclear Medicine and Molecular Imaging 2025
20. Comparison of conventional and radiomics-based analysis of myocardial infarction using multimodal non-linear optical microscopy; G Giardina, L Papp, A Krause, J Marchant, N Pallares-Lupon, K Kulkarni, **CP Spielvogel**, D Haberl, X Li, W Drexler, RD Walton, A Unterhuber and M Andreana; Scientific Reports 2025
21. Multimodal Optical Imaging Combined with Radiomic Analysis for Fibrotic Cardiac Tissue Investigation; A Krause, G Giardina, L Papp, D Haberl, **CP Spielvogel**, RD Walton, J Marchant, N Pallares-Lupon, K Kulkarni, X Li, DL Vasquez, J Popp, IW Schie, W Drexler, M Andreana and A Unterhuber; Analytical Chemistry 2025
22. Enhanced vascular inflammation in patients with advanced prostate cancer receiving hormone therapy; H Einspieler\*, D Muin\*, IK Langrate, S Schmitl, **CP Spielvogel**, BJ Fueger, X Li, G Kramer, SF Shariat, M Hacker and S Rasul; European Journal of Nuclear Medicine and Molecular Imaging 2025

23. Clinician-driven automated data preprocessing in nuclear medicine AI environments; D Krajnc, **CP Spielvogel**, 2025  
B Ecsedi, Z Ritter, H Alizadeh, M Hacker and L Papp; European Journal of Nuclear Medicine and Molecular Imaging
24. Imaging and outcome correlates of ctDNA methylation markers in prostate cancer: a comparative, cross-sectional [68Ga]Ga-PSMA-11 PET/CT study; K Kluge, V Lotz, H Einspieler, D Haberl, **CP Spielvogel**, D Amereller, G Kramer, B Grubmüller, S Shariat, AR Haug, M Hacker, L Kenner and G Egger; Clinical Epigenetics 2025
25. Systemic Metabolic and Volumetric Assessment via Whole-Body [18F]FDG-PET/CT: Pancreas Size Predicts Cachexia in Head and Neck Squamous Cell Carcinoma; J Yu, **CP Spielvogel**, D Haberl, Z Jiang, Ö Özer, S Pusitz, B Geist, M Beyerlein, I Tibu, E Yildiz, SA Kandathil, T Buschhorn, J Schnoell, K Kumpf, YT Chen, T Wu, Z Zhang, M Hacker and C Vraka; Cancers 2024
26. Multicenter PET Image Harmonization using Generative Adversarial Networks; D Haberl, **CP Spielvogel**, Z Jiang, F Orhac, D Iommi, I Carrio, I Buvat, A Haug, and L Papp; European Journal of Nuclear Medicine and Molecular Imaging 2024
27. Comparison of discovery rates and prognostic utility of [68Ga]Ga-PSMA-11 PET/CT and circulating tumor DNA in prostate cancer - a cross-sectional study; K Kluge, H Einspieler, D Haberl, **CP Spielvogel**, D Amereller, G Egger, G Kramer, B Grubmüller, S Shariat, M Hacker, L Kenner and A Haug. European Journal of Nuclear Medicine and Molecular Imaging 2024
28. Examining the Relationship and Prognostic Significance of Cell-Free DNA Levels and the PSMA-Positive Tumor Volume in Men with Prostate Cancer: A Retrospective-Pro prospective [68Ga]Ga-PSMA-11 PET/CT Study; K Kluge, H Einspieler, D Haberl, **CP Spielvogel**, S Stoiber, C Vraka, L Papp, S Wunsch, G Egger, G Kramer, B Grubmüller, S Shariat, M Hacker, L Kenner and A Haug; Journal of Nuclear Medicine 2024
29. Assessment of PSMA expression of healthy organs in different stages of prostate cancer using [68Ga]Ga-PSMA-11-PET examinations; H Einspieler, K Kluge, D Haberl, K Schatz, L Nics, S Schmitl, B K Geist, **CP Spielvogel**, B Grubmüller, PAT Baltzer, G Kramer, SF Shariat, M Hacker, and S Rasul. Cancers 2023
30. Mitochondrial polymorphism m3017C>T of SHLP6 relates to heterothermy; S V Emser, **CP Spielvogel**, E Millesi, R Steinborn; Frontiers in Physiology 2023
31. Error mitigation enables PET radiomic cancer characterization on quantum computers; S Moradi, **CP Spielvogel**, D Krajnc, C Brandner, S Hillmich, R Wille, T Traub-Weidinger, X Li, M Hacker, W Drexler, L Papp; European Journal of Nuclear Medicine and Molecular Imaging 2023
32. DEBI-NN: Distance-encoding biomorphic-informational neural networks for minimizing the number of trainable parameters; L Papp, D Haberl, B Ecsedi, **CP Spielvogel**, D Krajnc, M Grahovac, S Moradi, Wolfgang Drexler; Neural Networks 2023
33. Machine learning predictive performance evaluation of conventional and fuzzy radiomics in clinical cancer imaging cohorts; M Grahovac, **CP Spielvogel** D Krajnc, B Ecsedi, T Traub-Weidinger, S Rasul, K Kluge, M Zhao, X Li, M Hacker, A Haug and L Papp; European Journal of Nuclear Medicine and Molecular Imaging 2023
34. Sex-specific radiomic features of L-[S-methyl-11C] methionine PET in patients with newly-diagnosed gliomas in relation to IDH1 predictability; L Papp, S Rasul, **CP Spielvogel**, D Krajnc, N Poetsch, A Woehrer, EM Patronas, B Ecsedi, J Furtner, M Mitterhauser, IF Rausch, G Widhalm, T Beyer, M Hacker and T Traub-Weidinger; Frontiers in Oncology 2022

35. Automated data preparation for in vivo tumor characterization with machine learning; D Krajnc, **CP Spielvogel**, 2022  
M Grahovac, B Ecsedi, S Rasul, N Poetsch, T Traub-Weidinger, AR Haug, Z Ritter, H Alizadeh, M Hacker, T Beyer, and L Papp; *Frontiers in Oncology*
36. Multi-lesion radiomics of PET/CT for non-invasive survival stratification and histologic tumor risk profiling in 2022  
patients with lung adenocarcinoma; M Zhao, K Kluge, L Papp, M Grahovac, S Yang, C Jiang, D Krajnc, **CP Spielvogel**, B Ecsedi, A Haug, S Wang, M Hacker, W Zhang, and X Li; *European Radiology*
37. Clinical data classification with noisy intermediate scale quantum computers; S Moradi, C Brandner, **CP 2022**  
**Spielvogel**, D Krajnc, S Hillmich, R Wille, W Drexler and L Papp; *Scientific Reports*
38. Bleeding risk assessment in end-stage kidney disease: validation of existing risk scores and evaluation of a 2021  
machine learning-based approach; S Nopp, **CP Spielvogel**, S Schmaldienst, R Klauser-Braun, M Lorenz, B Bauer, I Pabinger MD Saemann, O Königsbrügge, and C Ay; *Thrombosis and Haemostasis*
39. Toward Quantitative in vivo Label-Free Tracking of Lipid Distribution in a Zebrafish Cancer Model; M 2021  
Andreana, C Sturtzel, **CP Spielvogel**, L Papp, R Leitgeb, W Drexler, M Distel and A Unterhuber; *Frontiers in Cell and Developmental Biology*
40. Morpho-Molecular Metabolic Analysis and Classification of Human Pituitary Gland and Adenoma Biopsies 2021  
Based on Multimodal Optical Imaging; G Giardina, A Micko, D Bovenkamp, A Krause, F Placzek, L Papp, D Krajnc, **CP Spielvogel**, M Winklehner, Romana Höftberger, F Vila, M Adreana, R Leitgeb, W Drexler, S Wolfsberger and A Unterhuber; *Cancers*
41. Supervised machine learning enables non-invasive lesion characterization in primary prostate cancer with 2021  
[Ga]Ga-PSMA-11 PET/MRI; L Papp, **CP Spielvogel**, B Grubmüller, M Grahovac, D Krajnc, B Ecsedi, R AM Sareshgi, D Mohamad, M Hamboeck, I Rausch, M Mitterhauser, W Wadsak, A R Haug, L Kenner, P Mazal, M Susani, S Hartenbach, P Baltzer, TH Helbich, G Kramer, SF Shariat, T Beyer, M Hartenbach and M Hacker; *European Journal of Nuclear Medicine and Molecular Imaging*
42. Breast Tumor Characterization Using [18F]FDG-PET/CT Imaging Combined with Data Preprocessing and 2021  
Radiomics; D Krajnc, L Papp, T S Nakuz, H F Magometschnigg, M Grahovac, **CP Spielvogel**, B Ecsedi, Z Bago-Horvath, A Haug, G Karanikas, T Beyer, M Hacker, TH Helbich and K Pinker; *Cancers*
43. Transcription factors CP2 and YY1 as prognostic markers in head and neck squamous cell carcinoma: analysis 2021  
of The Cancer Genome Atlas and a second independent cohort; J Schnoell, B J Jank, L Kadletz-Wanke, S Stoiber, **CP Spielvogel**, E Gurnhofer, L Kenner and G Heiduschka; *Journal of Cancer Research and Clinical Oncology*
44. Personalizing Medicine Through Hybrid Imaging and Medical Big Data Analysis; L Papp, **CP Spielvogel**, I 2018  
Rausch, M Hacker and T Beyer; *Frontiers in Physics*