



Martijn Starmans

PostDoc AI for Medical Image Processing / Radiomics

Experience

Mail

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Web & Git

- mstarmans91.github.io
- Martijn P. A. Starmans
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Personal Skills



10/22 - 12/22 Planned Research Visit

University of Barcelona, Barcelona, Spain

Martijn will visit the group of Prof. Dr. Karim Lekadir to collaborate on AI for oncology and cardiac imaging within the context of the EuCanImage and euCanShare consortia. Besides evaluating the use of (deep) radiomics in "new" applications, they will primarily work on federated learning, the FUTURE-AI guiding principles, and improving the clinical utility of (radiomics) AI tools.

09/21 - Now PostDoc

Erasmus Medical Center, Rotterdam, NL

Extending the work of his PhD, Martijn's research line focuses on generalization of radiomics biomarkers (conventional and deep learning based) using automated machine learning and meta-learning. He works on a variety of clinical applications (e.g. sarcoma, liver cancer, colorectal cancer, bladder cancer, melanoma, cardiomyopathy, neuroendocrine tumors, CRPS).

- **Collaboration:** with various (international) clinical groups (e.g. radiology, pathology, hepatology, surgery, oncology).
- **Management:** Active participant in various work packages and working groups of EuCanImage consortium. Co-developer of Imaging Office of department of Radiology and Nuclear Medicine.
- **Supervision:** 2 PhD students and 4 MSc students.

10/16 - 08/21 PhD Candidate

Erasmus Medical Center, Rotterdam, NL

Thesis defended 1st of February 2022 "cum laude" with the title "Streamlined Quantitative Imaging Biomarker Development: Generalization of radiomics through automated machine learning".

- **Generalization:** My radiomics framework has been successful in finding biomarkers in over 17 clinical applications and is now being used in over 25 studies by colleagues, other researchers, and companies.
- **Open-science:** Released the software for all his studies open source (e.g. WORC radiomics toolbox) and a large public database of 930 patients
- **Supervision:** 26 MSc/BSc students.

06/16 - 08/16 Internship

Philips Healthcare, Best, NL

Stitching of 2-D fluoroscopy images for fracture malalignment reduction.

09/15 - 04/16 MSc Thesis

Quantitative Imaging, Delft University of Technology, Delft, NL

Deformable registration in 3D Breast Ultrasound scans

Grants & Awards

2021	Open Research Award	Convergence Health & Technology
2020	Research Grant - co-applicant ¹	Hanarth Fonds
	•Topic: Automatic grading and phenotyping of soft-tissue tumors through machine learning to guide personalized cancer treatment.	
	•Total funding: 400,000 Euro.	
2019	Employee of the Year Honorable Mention	Department of Radiology and Nuclear Medicine, Erasmus MC
10/2017	Challenge Winner Hosted at Medical Image Computing and Computer Assisted Intervention (MICCAI) 2017.	Colorectal liver metastases survival prediction challenge

¹ Not officially mentioned as co-applicant due to formalities. Reference of formal applicant available upon request.

Education

09/14 - 08/16	MSc Applied Physics	Delft University of Technology, Delft, NL
	GPA: 8.0 / 10. Track: Imaging Physics, Specialization: Research and Development	
	Electives: Medical Imaging, Advanced Wave Propagation, Charged Particle Optics and Imaging Systems	
09/14 - 08/16	MSc Applied Physics Honours Track	Delft University of Technology, Delft, NL
	GPA: 7.6 / 10. Track: Quantum Nanoscience	
	Electives: Applications of Quantum Mechanics, Electronics for Quantum Computing	
09/10 - 08/13	BSc Applied Physics	Delft University of Technology, Delft, NL
	GPA: 7.6 / 10. Minor: Management in a high-tech environment, final project for Damen Shipyards, Thales Netherlands and Imtech (GPA: 8.0/10)	
09/04 - 06/10	High School	Gymnasium Felisenum, Velsen, NL
	GPA: 8.2 / 10 (cum laude)	

Teaching

2020 - Now	Machine Learning	MSc Technical Medicine, TU Delft
	Co-initiator and co-developer. Current tasks include giving lectures, supervising programming assignments, and examination.	
2017 - Now	Advanced Image Processing	MSc Technical Medicine, TU Delft
	Co-initiator and co-developer. Current tasks include giving lectures, supervising programming assignments, and examination.	
2017 - Now	Image Processing	BSc Technical Medicine, TU Delft
	Current tasks include giving lectures, supervising programming assignments, and examination.	

Invited Presentations

M. P. A. Starmans[†], *Current status and future outlook on artificial intelligence in radiological imaging for liver metastases*, Presented at the Liver Metastases Research Network (LMRN) Annual Meeting 2022, Jun. 2022.

—, *Multicentre studies for more robust radiomics signatures*, Presented at the ECR 2021, Mar. 2021.

M. P. A. Starmans[†] and M. Koek[†], *Reproducible radiomics through automated machine learning validated on twelve clinical applications*, Presented at the Euro-Bioimaging User Forum 2021: Understanding and Fighting Cancer, Jun. 2021.

M. P. A. Starmans[†], *Multicentre studies for more robust radiomics signatures*, Presented at the ECR 2020, Jul. 2020.

M. P. A. Starmans[†], S. R. van der Voort, R. L. Miclea, W. J. Niessen, M. G. Thomeer, and S. Klein, *Radiomics and liver tumors*, Presented at the Current and Future Perspectives in Primary Liver Tumors Symposium 2017, Aug. 2017.

M. P. A. Starmans[†], S. R. van der Voort, W. J. Niessen, and S. Klein, *A radiomics approach for colorectal liver metastases survival prediction*, Presented at the MICCAI 2017 - CPM Colorectal Liver Metastases Challenge, Sep. 2017.

Publications

Journal Papers

E. J. Bijl*, **M. P. A. Starmans***, J. M. Mostert, S. Klein, F. J. P. M. Huygen, and C. C. de Vos, “Automatic quantification of complex regional pain syndrome using radiomics and deep learning based on thermography images,” *In Preparation*.

M. K. Bos, J. Kraan, **M. P. A. Starmans**, J. Helmijr, A. Joosse, A. A. M. van der Veldt, P. A. W. te Boekhorst, J. W. M. Martens, S. M. Wilting, and S. Sleijfer, “Comprehensive characterization of circulating tumor cells and cell-free dna in patients with metastatic melanoma,” *Submitted*.

F. Dubost, P. Yilmaz, K. van Wijnen, H. Adams, T. Evans, **M. P. A. Starmans**, G. Bortsova, M. A. Ikram, W. J. Niessen, M. W. Vernooij, and M. de Bruijne, “Visual versus automated detection of enlarged perivascular spaces and their mimics,” *Submitted*.

M. P. A. Starmans, R. L. Miclea, V. Vilgrain, M. Ronot, Y. Purcell, J. Verbeek, W. J. Niessen, J. N. Ijzermans, R. A. de Man, M. Doukas, S. Klein*, and M. G. Thomeer*, “Automated differentiation of malignant and benign primary solid liver lesions on MRI: An externally validated radiomics model,” *Submitted*. medrxiv: 2021.08.10.21261827.

M. P. A. Starmans*, L. S. Ho*, F. Smits, N. Beije, I. de Kruijff, J. J. de Jong, D. M. Somford, E. R. Boevé, E. te Slaa, E. C. C. Cauberg, S. Klaver, A. G. van der Heijden, C. J. Wijburg, A. C. M. van de Luijtgaarden, H. H. E. van Melick, E. Cauffman, P. de Vries, R. Jacobs, W. J. Niessen, J. J. Visser, S. Klein, J. L. Boormans, and A. A. M. van der Veldt, “Optimization of preoperative lymph node staging in patients with muscle-invasive bladder cancer using radiomics on computed tomography,” *Journal of Personalized Medicine*, vol. 12, no. 5, Apr. 2022. doi: 10.3390/jpm12050726.

M. P. A. Starmans*, M. J. M. Timbergen*, M. Vos, M. Renckens, D. J. Grünhagen, G. J. L. H. van Leenders, R. S. Dwarkasing, F. E. J. A. Willemssen, W. J. Niessen, C. Verhoef, S. Sleijfer, J. J. Visser, and S. Klein, “Differential diagnosis and molecular stratification of gastrointestinal stromal tumors on CT images using a radiomics approach,”

Journal of Digital Imaging, vol. 15, pp. 127–136, Jan. 2022. doi: 10.1007/s10278-022-00590-2.

L. Angus*, **M. P. A. Starmans***, A. Rajicic, A. E. Odink, M. Jalving, W. J. Niessen, J. J. Visser, S. Sleijfer, S. Klein, and A. A. M. van der Veldt, “The BRAF P.V600E mutation status of melanoma lung metastases cannot be discriminated on computed tomography by LIDC criteria nor radiomics using machine learning,” *Journal of Personalized Medicine*, vol. 11, no. 4, p. 257, 4 Apr. 2021. doi: 10.3390/jpm11040257.

A. Blazevic*, **M. P. A. Starmans***, T. Brabander, R. S. Dwarkasing, R. A. H. van Gils, J. Hofland, G. J. H. Franssen, R. A. Feelders, W. J. Niessen, S. Klein, and W. W. de Herder, “Predicting symptomatic mesenteric mass in small intestinal neuroendocrine tumors using radiomics,” *Endocrine-Related Cancer*, vol. 28, no. 8, pp. 529–539, 8 Aug. 2021. doi: 10.1530/erc-21-0064.

J. M. Castillo T*, M. Arif*, **M. P. A. Starmans**, W. J. Niessen, C. H. Bangma, I. Schoots, and J. F. Veenland, “Classification of clinically significant prostate cancer on multi-parametric mri: A validation study comparing deep learning and radiomics,” *Cancers*, vol. 14, no. 1, Dec. 2021. doi: 10.3390/cancers14010012.

J. M. Castillo T, **M. P. A. Starmans**, M. Arif, W. J. Niessen, S. Klein, C. H. Bangma, I. G. Schoots, and J. F. Veenland, “A multi-center, multi-vendor study to evaluate the generalizability of a radiomics model for classifying prostate cancer: High grade vs. low grade,” *Diagnostics*, vol. 11, no. 2, p. 369, 2 Feb. 2021. doi: 10.3390/diagnostics11020369.

M. P. A. Starmans, M. J. M. Timbergren, M. Vos, G. A. Padmos, D. J. Grünhagen, C. Verhoef, S. Sleijfer, G. J. L. H. van Leenders, F. E. Buisman, F. E. J. A. Willemssen, B. G. Koerkamp, L. Angus, A. A. M. van der Veldt, A. Rajicic, A. E. Odink, M. Renckens, M. Doukas, R. A. de Man, J. N. M. IJzermans, R. L. Miclea, P. B. Vermeulen, M. G. Thomeer, J. J. Visser, W. J. Niessen, and S. Klein, “The WORC* database: MRI and CT scans, segmentations, and clinical labels for 930 patients from six radiomics studies,” *Submitted*, 2021. medRxiv: 2021.08.19.21262238.

M. P. A. Starmans, S. R. van der Voort, T. Phil, M. J. M. Timbergren, M. Vos, G. A. Padmos, W. Kessels, D. Hanff, D. J. Grünhagen, C. Verhoef, S. Sleijfer, M. J. van den Bent, M. Smits, R. S. Dwarkasing, C. J. Els, F. Fiduzi, G. J. L. H. van Leenders, A. Blazevic, J. Hofland, T. Brabander, R. van Gils, G. J. H. Franssen, R. A. Feelders, W. W. de Herder, F. E. Buisman, F. E. J. A. Willemssen, B. Groot Koerkamp, L. Angus, A. A. M. van der Veldt, A. Rajicic, A. E. Odink, M. Deen, J. M. Castillo T, J. F. Veenland, I. Schoots, M. Renckens, M. Doukas, R. A. de Man, J. N. M. Ijzermans, R. L. Miclea, P. B. Vermeulen, E. E. Bron, M. G. Thomeer, J. J. Visser, W. J. Niessen, and S. Klein, “Reproducible radiomics through automated machine learning validated on twelve clinical applications,” *Submitted*, 2021. arXiv: 2108.08618.

M. P. A. Starmans*, F. E. Buisman*, M. Renckens, F. E. J. A. Willemssen, S. R. van der Voort, B. Groot Koerkamp, D. J. Grünhagen, W. J. Niessen, P. B. Vermeulen, C. Verhoef, J. J. Visser, and S. Klein, “Distinguishing pure histopathological growth patterns of colorectal liver metastases on CT using deep learning and radiomics: A pilot study,” *Clinical & Experimental Metastasis*, 2021. doi: 10.1007/s10585-021-10119-6.

P. Kalendralis, Z. Shi, A. Traverso, A. Choudhury, M. Sloep, I. Zhovannik, **M. P. A. Starmans**, D. Grittner, P. Feltens, R. Monshouwer, S. Klein, R. Fijten, H. Aerts, A. Dekker, J. Soest, and L. Wee, “FAIR-compliant clinical, radiomics and DICOM metadata of RIDER,

interobserver, Lung1 and head-Neck1 TCIA collections," *Medical Physics*, vol. 47, no. 11, pp. 5931–5940, 11 Nov. 2020. doi: 10.1002/mp.14322.

M. J. M. Timbergren^{*}, **M. P. A. Starmans**^{*}, G. A. Padmos, D. J. Grünhagen, G. J. L. H. van Leenders, D. F. Hanff, C. Verhoef, W. J. Niessen, S. Sleijfer, S. Klein, and J. J. Visser, "Differential diagnosis and mutation stratification of desmoid-type fibromatosis on MRI using radiomics," *European Journal of Radiology*, vol. 131, p. 109266, Oct. 2020. doi: 10.1016/j.ejrad.2020.109266.

P. Kalendralis, A. Traverso, Z. Shi, I. Zhovannik, R. Monshouwer, **M. P. A. Starmans**, S. Klein, E. Pfaehler, R. Boellaard, A. Dekker, and L. Wee, "Multicenter CT phantoms public dataset for radiomics reproducibility tests," *Medical Physics*, vol. 46, no. 3, pp. 1512–1518, 3 Mar. 2019. doi: 10.1002/mp.13385.

S. R. van der Voort, F. Incekara, M. M. J. Wijnenga, G. Kapas, M. Gardeniers, J. W. Schouten, **M. P. A. Starmans**, R. N. Tewarie, G. J. Lycklama, P. J. French, H. J. Dubbink, M. J. van den Bent, A. J. P. E. Vincent, W. J. Niessen, S. Klein, and M. Smits, "Predicting the 1p/19q codeletion status of presumed low-grade glioma with an externally validated machine learning algorithm," *Clinical Cancer Research*, vol. 25, no. 24, pp. 7455–7462, 24 Dec. 2019. doi: 10.1158/1078-0432.ccr-19-1127.

M. Vos^{*}, **M. P. A. Starmans**^{*}, M. J. M. Timbergren, S. R. van der Voort, G. A. Padmos, W. Kessels, W. J. Niessen, G. J. L. H. van Leenders, D. J. Grünhagen, S. Sleijfer, C. Verhoef, S. Klein, and J. J. Visser, "Radiomics approach to distinguish between well differentiated liposarcomas and lipomas on MRI," *British Journal of Surgery*, vol. 106, no. 13, pp. 1800–1809, Dec. 2019. doi: 10.1002/bjs.11410.

Book Chapters

M. P. A. Starmans^{*}, S. R. van der Voort^{*}, J. M. Castillo T, J. F. Veenland, S. Klein, and W. J. Niessen, "Radiomics: Data mining using quantitative medical image features," in *Handbook of Medical Image Computing and Computer Assisted Intervention*, S. K. Zhou, D. Rueckert, and G. Fichtinger, Eds. Academic Press, 2020, ch. 18, pp. 429–456. doi: 10.1016/B978-0-12-816176-0.00023-5.

Conference Papers

K. B. de Raad[†], K. A. van Garderen, M. Smits, S. R. van der Voort, F. Incekara, E. H. G. Oei, J. Hirvasniemi, S. Klein, and **M. P. A. Starmans**, "The effect of preprocessing on convolutional neural networks for medical image segmentation," in *International Symposium on Biomedical Imaging (ISBI 2021)*, Apr. 2021. doi: 10.1109/ISBI48211.2021.9433952.

J. M. Castillo T[†], **M. P. A. Starmans**, W. J. Niessen, I. Schoots, S. Klein, and J. F. Veenland, "Classification of prostate cancer: High grade versus low grade using a radiomics approach," in *2019 IEEE 16th International Symposium on Biomedical Imaging (ISBI 2019)*, Institute of Electrical and Electronics Engineers (IEEE), Apr. 2019, pp. 1319–1322. doi: 10.1109/isbi.2019.8759217.

M. P. A. Starmans[†], R. L. Miclea, S. R. van der Voort, W. J. Niessen, M. G. Thomeer, and S. Klein, "Classification of malignant and benign liver tumors using a radiomics approach," in *Medical Imaging 2018: Image Processing*, E. D. Angelini and B. A. Landman, Eds., vol. 10574, SPIE-Intl Soc Optical Eng, Mar. 2018, pp. 343–349. doi: 10.1117/12.2293609.

Conference Abstracts

A. Blazevic[†], **M. P. A. Starmans**, T. Brabander, J. Hofland, G. J. H. Franssen, R. A. Feelders, W. J. Niessen, S. Klein, and W. W. de Herder, “Prediction of symptomatic mesenteric mass in patients with small intestinal neuroendocrine tumors using a CT radiomics approach,” in *Neuroendocrinology*, Abstracts of the 17th Annual ENETS Conference for the Diagnosis and Treatment of Neuroendocrine Tumor Disease, vol. 110, 2020, pp. 1–312.

M. P. A. Starmans[†], C. J. Els, F. Fiduzi, W. J. Niessen, S. Klein, and R. S. Dwarkasing, “Radiomics model to predict hepatocellular carcinoma on liver MRI of high-risk patients in surveillance: A proof-of-concept study,” in *Insights into Imaging*, ECR 2020 Book of Abstracts, Presented at the ECR 2020, vol. 11, May 2020, p. 419. doi: 10.1186/s13244-020-00851-0.

M. P. A. Starmans[†], M. J. M. Timbergren, G. A. Padmos, D. J. Grünhagen, G. J. L. H. van Leenders, D. F. Hanff, S. Sleijfer, J. J. Visser, and S. Klein, “Distinguishing desmoid-type fibromatosis from soft tissue sarcoma on MRI using a radiomics approach,” in *Insights into Imaging*, ECR 2020 Book of Abstracts, Presented at the ECR 2020, vol. 11, May 2020, p. 236. doi: 10.1186/s13244-020-00851-0.

M. P. A. Starmans[†], M. J. M. Timbergren, M. Vos, M. Renckens, D. J. Grünhagen, G. J. L. H. van Leenders, S. Sleijfer, J. J. Visser, and S. Klein, “Differential diagnosis and mutation stratification of gastrointestinal stromal tumours on CT images using a radiomics approach,” in *Insights into Imaging*, ECR 2020 Book of Abstracts, Presented at the ECR 2020, vol. 11, May 2020, p. 308. doi: 10.1186/s13244-020-00851-0.

M. P. A. Starmans[†], F. E. Buisman, F. Willemssen, S. R. van der Voort, D. J. Grünhagen, P. B. Vermeulen, C. Verhoef, S. Klein, and J. J. Visser, “Prediction of histopathological growth patterns by radiomics and CT-imaging in patients with operable colorectal liver metastases: A proof-of-concept study,” in *Insights into Imaging*, ECR 2020 Book of Abstracts, Presented at the ECR 2020, vol. 11, May 2020, p. 419. doi: 10.1186/s13244-020-00851-0.

M. P. A. Starmans[†], M. Vos, M. J. M. Timbergren, S. R. van der Voort, D. J. Grünhagen, S. Sleijfer, C. Verhoef, J. J. Visser, and S. Klein, “Distinguishing well-differentiated liposarcomas from lipomas on MR images using a radiomics approach,” in *Insights into Imaging*, ECR 2020 Book of Abstracts, Presented at the ECR 2020, vol. 11, May 2020, p. 235. doi: 10.1186/s13244-020-00851-0.

M. P. A. Starmans, S. R. van der Voort, H. C. Achterberg[†], T. Phil, M. J. M. Timbergren, M. Vos, G. A. Padmos, W. Kessels, D. Hanff, D. J. Grünhagen, C. Verhoef, S. Sleijfer, M. J. van den Bent, M. Smits, R. S. Dwarkasing, C. J. Els, F. Fiduzi, G. J. L. H. van Leenders, A. Blazevic, J. Hofland, T. Brabander, R. van Gils, G. J. H. Franssen, R. A. Feelders, W. W. de Herder, F. E. Buisman, F. E. J. A. Willemssen, B. Groot Koerkamp, L. Angus, A. A. M. van der Veldt, A. Rajacic, A. E. Odink, M. Deen, J. M. Castillo T, J. F. Veenland, I. Schoots, M. Renckens, M. Doukas, R. A. de Man, J. N. M. Ijzermans, R. L. Miclea, P. B. Vermeulen, E. E. Bron, M. G. Thomeer, J. J. Visser, W. J. Niessen, and S. Klein, “Fully automatic construction of optimal radiomics workflows,” in *Health-RI Conference*, 2020.

M. J. M. Timbergren[†], **M. P. A. Starmans**, M. Vos, M. Renckens, D. J. Grünhagen, G. J. L. H. van Leenders, W. J. Niessen, C. Verhoef, S. Sleijfer, S. Klein, and J. J. Visser, “Radiomics of gastrointestinal stromal tumors; risk classification based on computed tomography im-

ages – a pilot study,” 2, vol. 46, Elsevier BV, Feb. 2020, p. e6. doi: 10.1016/j.ejso.2019.11.011.

P. Kalendralis[†], A. Traverso, Z. Shi, I. Zhovannik, R. Monshouwer, **M. P. A. Starmans**, S. Klein, P. Elisabeth, R. Boellaard, A. Dekker, and L. Wee, “Multicenter CT phantoms public dataset for radiomics reproducibility studies,” vol. 133, Elsevier BV, Apr. 2019, p. S1030. doi: 10.1016/s0167-8140(19)32315-1.

M. P. A. Starmans[†], S. van der Voort, R. L. Miclea, M. Vos, F. Incekara, M. J. M. Timbergen, M. M. J. Wijnenga, G. A. Padmos, W. Kessels, G. J. L. H. van Leenders, G. Kapsas, M. J. Van den Bent, A. J. P. E. Vincent, D. J. Grünhagen, C. Verhoef, S. Sleijfer, J. J. Visser, M. Smits, M. G. Thomeer, W. J. Niessen, and S. Klein, “Fully automatic construction of optimal radiomics workflows,” in *7th Dutch Bio-Medical Engineering (BME) Conference*, Presented at the BME Conference 2019, 2019.

M. P. A. Starmans[†], A. Blazevic, T. Brabander, J. Hofland, W. J. Niessen, W. W. de Herder, and S. Klein, “Prediction of surgery requirement in mesenteric fibrosis on CT using a radiomics approach,” in *Insights into Imaging*, ECR 2019: Book of Abstracts, Presented at the ECR 2019, vol. 10, Feb. 2019, p. S457. doi: 10.1186/s13244-019-0713-y.

M. P. A. Starmans[†], R. Miclea, S. R. van der Voort, W. J. Niessen, S. Klein, and M. G. Thomeer, “Classification of malignant and benign liver tumours using a radiomics approach,” in *Insights into Imaging*, ECR 2019: Book of Abstracts, Presented at the ECR 2019, vol. 10, Feb. 2019, p. S200. doi: 10.1186/s13244-019-0713-y.

M. P. A. Starmans[†], S. R. van der Voort, M. Vos, F. Incekara, J. J. Visser, M. Smits, M. G. Thomeer, W. J. Niessen, and S. Klein, “Fully automatic construction of optimal radiomics workflows,” in *Insights into Imaging*, ECR 2019: Book of Abstracts, Presented at the ECR 2019, vol. 10, Feb. 2019, p. S379. doi: 10.1186/s13244-019-0713-y.

T. Theodoridis[†], **M. P. A. Starmans**, S. Klein, and E. E. Bron, “Radiomics features for use in dementia diagnosis,” in *36th Annual Scientific Meeting of the ESMRMB*, 2019.

M. J. M. Timbergen[†], **M. P. A. Starmans**, M. Vos, G. A. Padmos, D. J. Grünhagen, G. J. L. H. van Leenders, C. Verhoef, W. J. Niessen, S. Sleijfer, S. Klein, and J. J. Visser, “Mutation stratification of desmoid-type fibromatosis using a radiogenomics approach,” 2, vol. 45, Elsevier BV, Feb. 2019, p. e16. doi: 10.1016/j.ejso.2018.10.084.

M. J. M. Timbergen[†], **M. P. A. Starmans**, M. Vos, M. Renckens, D. J. Grünhagen, G. J. L. H. van Leenders, W. J. Niessen, C. Verhoef, S. Sleijfer, S. Klein, and J. J. Visser, “Radiomics of gastrointestinal stromal tumours, risk classification based on computed tomography images: A pilot study,” Supplement 5, vol. 30, Elsevier BV, Oct. 2019, pp. v699–v700. doi: 10.1093/annonc/mdz283.040.

A. Traverso[†], I. Zhovannik, Z. Shi, P. Kalendralis, R. Monshouwer, **M. P. A. Starmans**, S. Klein, E. Pfaehler, R. Boellaard, A. Dekker, and L. Wee, “Are quality assurance phantoms useful to assess radiomics reproducibility? a multi-center study,” vol. 133, Elsevier BV, Apr. 2019, pp. S515–S516. doi: 10.1016/s0167-8140(19)31373-8.

M. Vos[†], **M. P. A. Starmans**, M. J. M. Timbergen, S. R. van der Voort, G. A. Padmos, W. Kessels, W. J. Niessen, G. J. L. H. van Leenders, D. J. Grünhagen, S. Sleijfer, C. Verhoef, S. Klein, and J. J. Visser, “Differentiating well-differentiated liposarcomas from lipomas using a radiomics approach,” in *Annals of Oncology*, Abstract Book of the 44th

ESMO Congress (ESMO 2019), vol. 30, Elsevier BV, Oct. 2019, p. v700. doi: 10.1093/annonc/mdz283.041.

M. P. A. Starmans[†], S. R. van der Voort, R. L. Miclea, M. Vos, F. Incekara, M. J. M. Timbergen, M. M. J. Wijnenga, G. A. Padmos, G. J. L. H. van Leenders, G. Kapsas, M. J. van den Bent, A. J. P. E. Vincent, D. J. Grünhagen, C. Verhoef, S. Sleijfer, J. J. Visser, M. Smits, M. G. Thomeer, W. J. Niessen, and S. Klein, “Harmonizing radiomics among applications through adaptive workflow optimization,” in *European Society of Medical Imaging Informatics (EuSoMII) Annual Meeting*, Presented at the EuSoMII Annual Meeting 2018, 2018.

M. P. A. Starmans[†], F. Buisman, S. R. van der Voort, M. Renckens, B. Galjart, P. Nierop, W. J. Niessen, C. Verhoef, J.-J. Visser, and S. Klein, “Prediction of histopathological growth patterns in colorectal liver metastases using a radiomics approach,” in *Dutch Society for Pattern Recognition (NVPHBV) Spring Meeting*, Presented at the NVPHBV Spring Meeting 2017, 2017.

Software

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