WOUTER A.C. VAN AMSTERDAM, MD, MSC.

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EDUCATION

University Medical Center Utrecht
Doctor of Philosophy *2017-2022*
Machine learning and causal inference for lung cancer
Advisors: Prof. Dr. Tim Leiner, Prof. Dr. Pim de Jong, University Medical Center Utrecht
Co-advisors: Joost Verhoeff, MD, PhD, University Medical Center Utrecht
Rajesh Ranganth, PhD, New York University
Alexandre Suerman Masterclass Program

Master of Science *2017-2020*
Epidemiology, track: medical statistics
Passed with distinction (cum laude), Overall GPA: 4.0 / 4.0

Doctor of Medicine *2014-2017*
Honors program, Honors thesis: "Liver steatosis and pulmonary disease in lung cancer screening participants with and without chronic obstructive pulmonary disease"
Masters thesis: "Radiomic signature of early-stage lung cancer predicts progression-free survival and distant metastasis in lung cancer screening participants"
Overall GPA: 3.7 / 4.0

Bachelor of Medicine *2011-2014*
Honors program, Honors thesis: "The anatomy of renal nerves and renal denervation"
Overall GPA: 3.4 / 4.0

Utrecht University *2007-2010*
Bachelor of Physics and Astronomy
Overall GPA: 3.5 / 4.0

SELECTED PUBLICATIONS

van Laar M, **van Amsterdam, WAC**, van Lindert ASR, Jong PA de, and Verhoeff JJC. Prognostic factors for overall survival of stage III non-small cell lung cancer patients on computed tomography: A systematic review and meta-analysis. en. Radiotherapy and Oncology 2020 Oct; 151:152–75. DOI: 10.1016/j.radonc.2020.07.030. Available from: http://www.sciencedirect.com/science/article/pii/S0167814020306745 [Accessed on: 2020 Dec 17]

van Amsterdam, WAC, Verhoeff JJC, Jong PA de, Leiner T, and Eijkemans MJC. Eliminating biasing signals in lung cancer images for prognosis predictions with deep learning. en. npj Digital Medicine 2019 Dec; 2. Number: 1 Publisher: Nature Publishing Group:1–6. DOI: 10.1038/s41746-019-0194-x. Available from: https://www.nature.com/articles/s41746-019-0194-x [Accessed on: 2020 Mar 23]

van Amsterdam, WAC, Verhoeff JJC, Harlianto NI, Bartholomeus GA, Puli AM, Jong PAd, Leiner T, van Lindert ASR, Eijkemans MJC, and Ranganath R. Treatment effect estimation in the presence of unobserved confounding using proxies: a study of non-small cell lung cancer. submitted

van Amsterdam, WAC, Harlianto NI, Verhoeff JJC, Moeskops P, Jong PA de, and Leiner T. On the association between muscle mass and overall survival and its dependence on muscle density in non-small cell lung cancer. submitted

GRANTS & AWARDS

Stichting Drie Lichten - Travel Grant 2019
Travel grant for visiting NYU during my PhD

Monetary Value: €5,000.-

Stichting Girard De Mielet van Coehoorn - Travel Grant 2019
Travel grant for visiting NYU during my PhD

Monetary Value: €1,250.-

ZonMW 2018
Good use of medicine grant (Goed Gebruik Geneesmiddelen)

Project: Predicting response of metastatic melanoma to immunotherapy using machine learning
My role in the application was to draft the initial application and to coordinate the collaborative writing and keep track of deadlines and tasks for the team of 10 applicants

Monetary Value: €550,000.-
Philips co-fund: €100,000.-

NVIDIA - GPU academic seeding program (2x) 2018
Graphics processing unit for deep learning experiments

· Monetary Value: €12,000.-

Alexandre Suerman Fellowship MD / PhD program 2017
PhD stipend and masterclass program

The Alexandre Suerman program is a training program for scientific talent from the University Medical Center Utrecht. Moreover, the program includes masterclasses which aim to develop the researcher in a broader perspective.

Monetary Value: €180,000.-

Bright Minds award of Utrecht University 2016
Pitch presenter at the "Dare to Cross-Over" event on "Diagnosing lung cancer with Radiomics"

· Monetary Value: €500.-

BBMRI-NL research grant 2015
Co-applicant for project 'Systems Radiology'

Monetary Value: €20,000.-

Student Research Congress - Delft the Netherlands 2014
Bachelor thesis selected for poster presentation

TALKS

Machine Learning for Health Care Conference 2021
Poster presentation

Treatment effect estimation in the presence of unobserved confounding using proxies: an observational cohort study of stage III non-small cell lung cancer patients

European Radiotherapy Congress (ESTRO) 2021
Poster presentation

· Treatment effect estimation in the presence of unobserved confounding using proxies: an observational cohort study of stage III non-small cell lung cancer patients

Dutch Association of Epidemiology yearly symposium 2020
Invited talk

· "Eliminating Biasing Signals in Lung Cancer Images for Prognosis Predictions with Deep Learning" led to an invited talk for the session on collider bias (cancelled due to COVID-19 restrictions)

AAAI - Why 2019
Oral abstract presentation

"Eliminating Biasing Signals in Lung Cancer Images for Prognosis Predictions with Deep Learning". Other speakers at this small-scale symposium were Judea Pearl, Yoshua Bengio, Thomas Dietterich, John Ionnidis and Elias Bereinboim

Probus Service Club 2018
Invited Seminar *Utrecht*

· "Big data in health care"

REVIEWING EXPERIENCE

Biostatistics, Machine Learning for Healthcare @NeuRIPS, IEEE-access, Journal of Cardiovascular Magnetic Resonance, Netherlands Heart Journal, Oncologie, Journal of Thoracic Disease

RESEARCH EXPERIENCE

CILVR - New York University April - June 2019
Visiting PhD researcher with Rajesh Ranganath, PhD *New York City*

· Worked on methodological aspects of my main PhD project: Treatment recommendations for lung cancer patients using deep learning and causal inference. Continued collaboration until today.

Artificial Intelligence in Medicine Lab - Harvard Medical School July - October 2016
Visiting Student Researcher with Hugo Aerts, PhD *Boston, Massachusetts*

· Predicting disease progression based on quantitative image features and machine learning
· Grade: 9 (out of 10)
· Awarded with Utrecht University Bright Mind award

Radiology Department - University Medical Center Utrecht 2015 - 2016
Student researcher with Prof. Dr. T. Leiner and Prof. Dr. P.A. de Jong *Utrecht*

· The association between quantitative image features of the lung and liver and clinical lung disease
· Grade: 8.5 (out of 10)

Anatomy Department - University Medical Center Utrecht 2011 - 2014
Undergraduate researcher with Prof. Dr. R.L.A.W. Bleys *Utrecht*

· Anatomy of nerves surrounding the renal artery
· Grade: 9 (out of 10)

Physics of man - Utrecht University 2009 - 2010
Student researcher with Prof. Dr. R. van Ee *Utrecht*

· The effect of subliminal priming on spatial concentration
· Grade: 8 (out of 10)

TEACHING EXPERIENCE

University Medical Center of Utrecht 2017 - 2021
Supervision of student research project *Utrecht*

· Supervision of students in medicine, bio-medical sciences, artificial intelligence at bachelor and master level

Anatomy Department - University Medical Center of Utrecht 2013 - 2014
Teaching Assistant - several anatomy courses *Utrecht*

· Supervision of dissection and anatomical orientation

Capita Selecta 2013
Lecturer - extra-curricular exam training *Utrecht*

· Wrote the syllabus and gave exam training

OTHER ACTIVITIES

Dare to cross-over - Utrecht University 2017
Jury President

Symposium event showcasing multidisciplinary student research across Utrecht University

Graduate Think Tank 2017
Committee member

Student Think Tank on reform of graduate studies

Medical Masters Honors Program - University Medical Center Utrecht 2016
Organizing committee member

Lecture on "Medical Leadership"

Catholic Heritage Foundation 2014
Committee Chairman

Symposium on "Suffering and faith"

Navigators Student Association 2010 - 2011
Full time board member - treasurer *Utrecht*

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LANGUAGES

Dutch	Native
English	Speak fluently and write with high proficiency
German & French	Basic proficiency
R programming language	Fluently
Python programming language	Fluently, experience in PyTorch, Jax, Pyro, NumPyro

GENERAL INTERESTS

Science, medicine, machine learning, causal inference, bioinformatics, medical ethics, networking, music (Jazz guitar and classical piano)

OTHER PUBLICATIONS

Bastiaannet R, Roekel C van, Smits MLJ, Elias SG, **van Amsterdam, Wouter A. C.**, Doan D, Prince JF, Bruijnen RCG, Jong HWAM de, and Lam MGEH. First Evidence for a Dose–Response Relationship in Patients Treated with 166Ho Radioembolization: A Prospective Study. en. Journal of Nuclear Medicine 2020 Apr; 61. Publisher: Society of Nuclear Medicine Section: Radionuclide Therapy:608–12. DOI: 10.2967/jnumed.119.232751. Available from: https://jnm.snmjournals.org/content/61/4/608 [Accessed on: 2021 Jan 8]

van Amsterdam, Wouter A. C., Blankestijn PJ, Goldschmeding R, and Bleys RLAW. The morphological substrate for Renal Denervation: Nerve distribution patterns and parasympathetic nerves. A post-mortem histological study. Annals of Anatomy - Anatomischer Anzeiger 2016 Mar; 204. 00000:71–9. DOI: 10.1016/j.aanat.2015.11.004. Available from: http://www.sciencedirect.com/science/article/pii/S0940960215001466 [Accessed on: 2015 Dec 18]