Noémi Kreif

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Biosketch

I am an Assistant Professor of Health Economics at the CHOICE Institute in the Department of Pharmacy at the University of Washington School of Pharmacy, where I joined the faculty in March 2024. My research **develops and applies causal inference methods to evaluate health policies and interventions**, combining machine learning with econometric and epidemiologic methods to **estimate heterogeneous treatment and policy effects that inform targeting, personalization, and policy design**. I have applied these methods to national health insurance reforms, provider payment policies, digital health interventions, mental health and economic outcomes, and the health impacts of conflict and violence, in **both high-income and low- and middle-income countries**. I received my PhD in Health Economics from the London School of Hygiene and Tropical Medicine (University of London) in 2013 and previously held postdoctoral and faculty positions at LSHTM and the University of York, where I was promoted to Senior Research Fellow (UK Grade 8, equivalent to Associate Professor). I have authored **57 peer-reviewed journal articles in health economics, health policy, epidemiology, and statistics, 12 as first author and 9 as senior author**, and 5 invited chapters and editorials (h-index 28, Google Scholar). I have been **principal investigator on 4 and co-investigator on 7 externally funded projects**, with funding from the UK Medical Research Council, NIHR, the Wellcome Trust, and the European Commission.

Current position

2024– **Assistant Professor**, The Comparative Health Outcomes, Policy, and Economics (CHOICE) Institute, School of Pharmacy, University of Washington

Past positions

2021–2024 **Senior Research Fellow in Health Economics** (UK Grade 8, equivalent to Associate Professor), Centre for Health Economics (CHE), University of York

2016–2021 **Research Fellow in Health Economics** (equivalent to Assistant Professor), CHE, University of York

2015–2016 **Lecturer in Health Economics** (equivalent to Assistant Professor), London School of Hygiene and Tropical Medicine (LSHTM); Medical Research Council Early Career Fellow in the Economics of Health (2014–2017)

2013–2015 **Postdoctoral Research Fellow in Health Economics**, LSHTM

2006–2012 **Research Associate in Health Economics**, United BioSource Corporation

Education

2013 **PhD in Health Economics**, London School of Hygiene and Tropical Medicine, University of London (UK). Thesis: "Statistical methods to address selection bias in economic evaluation that uses observational data"

2008 **MA in Economics**, Central European University, Hungary

2006 **MSc in Economics**, Corvinus University of Budapest, Hungary; Rajk László College for Advanced Studies, Hungary

Visiting positions

2022	**Visiting Researcher**, Center for Targeted Machine Learning and Causal Inference, UC Berkeley
2016	**Visiting Researcher**, Kaiser Permanente Division of Research
2015	**Visiting Researcher**, Division of Biostatistics, UC Berkeley
2010	**Visiting Graduate Student**, Center for Causal Inference and Program Evaluation, UC Berkeley

Fellowships and awards

2026–2027	**MQ Foundation Fellowship in Economics and Mental Health Research**, The Kennedy Forum
2026	**Outstanding Reviewer**, *Value in Health*
2014–2017	**Early Career Fellowship in the Economics of Health**, Medical Research Council (UK)
2009–2012	**PhD studentship**, Economic and Social Research Council (UK), with the Advanced Quantitative Methods Enhanced Stipend

Publications

57 peer-reviewed journal articles (12 as first author, 9 as senior author; 16 with student or trainee co-authors) · Citations: 3,152 · h-index: 28 (Google Scholar, October 2026).

* first, joint first, or senior author. ‡ student or trainee co-author (a student or postdoctoral researcher I supervised or advised). Titles link to the published version.

Peer-reviewed journal articles

Causal machine learning for health policy evaluation

57. *Hatamyar J‡, **Kreif N**. Policy learning in practice: simulation evidence and a case study of optimal allocation of subsidised health insurance. *Statistics in Medicine*. Accepted for publication, 2026.
56. *Shah V‡, Hatamyar J‡, Hidayat T, **Kreif N**. Exploring the heterogeneous impacts of Indonesia's conditional cash transfer scheme (PKH) on maternal health care utilisation using instrumental causal forests. *Empirical Economics*. 2026;70(2):39.
55. Paton LW, **Kreif N**, Aylott LME, Kerrigan P, Nader C, Gega L, Tiffin PA. The impact of physical activity on psychological distress in young people: An analysis of longitudinal data from the Millennium Cohort Study using causal machine learning. *JCPP Advances*. 2026;6(2):e70035.
54. *Shah V‡, Jones AM, Malenica I, Hidayat T, **Kreif N**. Using Policy Learning to Inform Health Insurance Targeting: A Case Study of Indonesia. *Health Economics*. 2025;34(12):2270–2296.
53. *Shah V‡, **Kreif N**. Estimating heterogeneous impacts of subsidised health insurance: A causal machine learning approach. *PLOS One*. 2025;20(9):e0315057.
52. Zhang Y, **Kreif N**, GC VS, Manca A. Machine Learning Methods to Estimate Individualized Treatment Effects for Use in Health Technology Assessment. *Medical Decision Making*. 2024;44(7):756–769.
51. *Glynn D, Giardina J, Hatamyar J‡, Pandya A, Soares M, **Kreif N**. Integrating decision modeling and machine learning to inform treatment stratification. *Health Economics*. 2024;33(8):1772–1792.
50. Padula WV, **Kreif N**, Vanness DJ, Adamson B, Rueda JD, Felizzi F, Jonsson P, IJzerman MJ, Butte A, Crown W. Machine Learning Methods in Health Economics and Outcomes Research—The PALISADE Checklist: A Good Practices Report of an ISPOR Task Force. *Value in Health*. 2022;25(7):1063–1080.
49. ***Kreif N**, DiazOrdaz K, Moreno-Serra R, Mirelman A, Hidayat T, Suhrcke M. Estimating heterogeneous policy impacts using causal machine learning: a case study of health insurance reform in Indonesia. *Health Services and Outcomes Research Methodology*. 2022;22(2):192–227.

48. DiazOrdaz K, Daniel R, **Kreif N**. Data-adaptive doubly robust instrumental variable methods for treatment effect heterogeneity. *Journal de la Société Française de Statistique*. 2020;161(1):135–163. (Special issue on causality.)

Causal inference methods for decision science

47. Kaló Z, Petrova G, Németh B, Došenović Bonča P, Delnoij D, Bennett A, Tachkov K, Zhang Y, **Kreif N**, et al. Transferability of Real World Evidence to Support HTA Recommendations in Lower Income European Countries. *Health Science Reports*. 2026;9(2):e71534.
46. *Zhang Y, Bennett A, Manca A, Mittelman M, Hoeks M, Smith A, Taylor A, Stauder R, de Witte T, Malcovati L, van Marrewijk C, **Kreif N**. Estimating the Causal Effect of Realistic Treatment Strategies Using Longitudinal Observational Data. *Medical Decision Making*. 2026;46(2):144–157.
45. Rodrigues D[‡], **Kreif N**, Lawrence-Jones A, Barahona M, Mayer E. Reflection on modern methods: constructing directed acyclic graphs (DAGs) with domain experts for health services research. *International Journal of Epidemiology*. 2022;51(4):1339–1348.
44. Ciminata G, Geue C, Wu O, Deidda M, **Kreif N**, Langhorne P. Propensity score methods for comparative-effectiveness analysis: A case study of direct oral anticoagulants in the atrial fibrillation population. *PLOS ONE*. 2022;17(1):e0262293.
43. *__Kreif N__, Sofrygin O, Schmittdiel JA, Adams AS, Grant RW, Zhu Z, van der Laan MJ, Neugebauer R. Exploiting nonsystematic covariate monitoring to broaden the scope of evidence about the causal effects of adaptive treatment strategies. *Biometrics*. 2021;77(1):329–342.
42. *__Kreif N__, Tran L, Grieve R, De Stavola B, Tasker RC, Petersen M. Estimating the comparative effectiveness of feeding interventions in the pediatric intensive care unit: a demonstration of longitudinal targeted maximum likelihood estimation. *American Journal of Epidemiology*. 2017;186(12):1370–1379.
41. *__Kreif N__, Gruber S, Radice R, Grieve R, Sekhon JS. Evaluating treatment effectiveness under model misspecification: A comparison of targeted maximum likelihood estimation with bias-corrected matching. *Statistical Methods in Medical Research*. 2016;25(5):2315–2336.
40. *__Kreif N__, Grieve R, Díaz I, Harrison D. Evaluation of the Effect of a Continuous Treatment: A Machine Learning Approach with an Application to Treatment for Traumatic Brain Injury. *Health Economics*. 2015;24(9):1213–1228.
39. *__Kreif N__, Grieve R, Radice R, Sekhon JS. Regression-adjusted matching and double-robust methods for estimating average treatment effects in health economic evaluation. *Health Services and Outcomes Research Methodology*. 2013;13(2-4):174–202.
38. *__Kreif N__, Grieve R, Sadique MZ. Statistical methods for cost-effectiveness analyses that use observational data: a critical appraisal tool and review of current practice. *Health Economics*. 2013;22(4):486–500.
37. *__Kreif N__, Grieve R, Radice R, Sadique Z, Ramsahai R, Sekhon JS. Methods for Estimating Subgroup Effects in Cost-Effectiveness Analyses That Use Observational Data. *Medical Decision Making*. 2012;32(6):750–763.
36. Radice R, Ramsahai R, Grieve R, **Kreif N**, Sadique Z, Sekhon JS. Evaluating treatment effectiveness in patient subgroups: a comparison of propensity score methods with an automated matching approach. *The International Journal of Biostatistics*. 2012;8(1).

Health policy evaluation

35. Rodrigues D[‡], **Kreif N**, Darzi A, Barahona M, Mayer E. Key factors behind the adoption of a patient-facing technology in primary care: a structured approach to variable importance. *Health Services and Outcomes Research Methodology*. 2026;26(3):392–410.
34. Rodrigues D[‡], **Kreif N**, Darzi A, Barahona M, Mayer E. Digitalization of Access to Primary Care: Is There an Equity-Efficiency Trade-Off? *Health Economics*. 2025;34(10):1943–1962.

33. Aragón MJ, Chalkley M, **Kreif N**. The long-run effects of diagnosis related group payment on hospital lengths of stay in a publicly funded health care system: Evidence from 15 years of micro data. *Health Economics*. 2022;31(6):956–972.
32. Rodrigues D‡, **Kreif N**, Saravanakumar K, Delaney B, Barahona M, Mayer E. Formalising triage in general practice towards a more equitable, safe, and efficient allocation of resources. *BMJ*. 2022;377:e070757.
31. O'Neill S, **Kreif N**, Sutton M, Grieve R. A comparison of methods for health policy evaluation with controlled pre-post designs. *Health Services Research*. 2020;55(2):328–338.
30. Gaughan J, Gutacker N, Grašič K, **Kreif N**, Siciliani L, Street A. Paying for efficiency: Incentivising same-day discharges in the English NHS. *Journal of Health Economics*. 2019;68:102226.
29. Deidda M, Geue C, **Kreif N**, Dundas R, McIntosh E. A framework for conducting economic evaluations alongside natural experiments. *Social Science & Medicine*. 2019;220:353–361.
28. O'Neill S, **Kreif N**, Grieve R, Sutton M, Sekhon JS. Estimating causal effects: considering three alternatives to difference-in-differences estimation. *Health Services and Outcomes Research Methodology*. 2016;16(1-2):1–21.
27. *__Kreif N__, Grieve R, Hangartner D, Turner AJ, Nikolova S, Sutton M. Examination of the Synthetic Control Method for Evaluating Health Policies with Multiple Treated Units. *Health Economics*. 2016;25(12):1514–1528.

Global health policy

26. Ochoa-Moreno I, **Kreif N**, Hidayat T, Kurnia S, Hidayat B, Griffin S. Does increasing overall health expenditure reduce inequality in under 5 mortality rates between provinces in Indonesia? *Health Policy and Planning*. 2026;41(7):1242–1254.
25. Diaz MD, Pereda P, Rocha F, Oliveira P, Árabe I, **Kreif N**, Lordemus S, Moreno-Serra R. Public policies and femicides during the COVID-19 pandemic: evidence from São Paulo, Brazil. *Economics & Human Biology*. 2025;58:101508.
24. *McGuire F‡, Santos R, Smith PC, Stacey N, Edoka I, **Kreif N**. Health facility quality peer effects: Are financial incentives necessary? *Regional Science and Urban Economics*. 2025;112:104091.
23. *McGuire F‡, Smith PC, Stacey N, Edoka I, **Kreif N**. Do health care quality improvement policies work for all? Distributional effects by baseline quality in South Africa. *Health Economics*. 2025;34(1):175–199.
22. Lordemus S, **Kreif N**, Moreno-Serra R. Public Healthcare Financing during Counterinsurgency Efforts: Evidence from Colombia. *Oxford Bulletin of Economics and Statistics*. 2024;86(5):1230–1259.
21. Salas-Ortiz A, Moreno-Serra R, **Kreif N**, Suhrcke M, Casas G. The effect of conflict-related violence intensity and alcohol use on mental health: The case of Colombia. *SSM - Population Health*. 2024;25:101626.
20. Rocha F, Diaz MDM, Pereda PC, Árabe IB, Cavalcanti F, Lordemus S, **Kreif N**, Moreno-Serra R. COVID-19 and violence against women: Current knowledge, gaps, and implications for public policy. *World Development*. 2024;174:106461.
19. *Moler-Zapata S‡, **Kreif N**, Ochalek J, Mirelman AJ, Nadjib M, Suhrcke M. Estimating the Health Effects of Expansions in Health Expenditure in Indonesia: A Dynamic Panel Data Approach. *Applied Health Economics and Health Policy*. 2022;20(6):881–891.
18. *__Kreif N__, Mirelman A, Suhrcke M, Buitrago G, Moreno-Serra R. The impact of civil conflict on child health: Evidence from Colombia. *Economics & Human Biology*. 2022;44:101074.
17. McGuire F‡, **Kreif N**, Smith PC. The effect of distance on maternal institutional delivery choice: Evidence from Malawi. *Health Economics*. 2021;30(9):2144–2167.

16. León-Giraldo S, Casas G, Cuervo-Sánchez JS, González-Uribe C, Olmos A, **Kreif N**, Suhrcke M, Bernal O, Moreno-Serra R. A light of hope? Inequalities in mental health before and after the peace agreement in Colombia: a decomposition analysis. *International Journal for Equity in Health*. 2021;20(1):39.
15. León-Giraldo S, Cuervo-Sánchez JS, Casas G, González-Uribe C, **Kreif N**, Bernal O, Moreno-Serra R. Inequalities in catastrophic health expenditures in conflict-affected areas and the Colombian peace agreement: an Oaxaca-Blinder change decomposition analysis. *International Journal for Equity in Health*. 2021;20(1):217.
14. Stacey N, Mirelman A, **Kreif N**, Suhrcke M, Hofman K, Edoka I. Facility standards and the quality of public sector primary care: Evidence from South Africa's "Ideal Clinics" program. *Health Economics*. 2021;30(7):1543–1558.
13. *__Kreif N__, Mirelman AJ, Love-Koh J, Kim S‡, Moreno-Serra R, Revill P, Sculpher M, Suhrcke M. From impact evaluation to decision-analysis: assessing the extent and quality of evidence on 'value for money' in health impact evaluations in low- and middle-income countries. *Gates Open Research*. 2021;5:1.
12. Chi YL, Blecher M, Chalkidou K, Culyer A, Claxton K, Edoka I, Glassman A, **Kreif N**, et al. What next after GDP-based cost-effectiveness thresholds? *Gates Open Research*. 2020;4:176.

Applications in health economics and outcomes research

11. Yip O, **Kreif N**, Clayton E, Lee K. Healthcare utilization and cost associated with depression among people with Alzheimer's disease: a retrospective cohort analysis. *Journal of Managed Care & Specialty Pharmacy*. 2026 (in press).
10. Nwogu IB‡, **Kreif N**, Khan HM, Etzioni R, Carlson JJ. Real-World Comparative Effectiveness of Abiraterone, Apalutamide, Enzalutamide, and Docetaxel Doublets for Metastatic Hormone-Sensitive Prostate Cancer. *JCO Oncology Practice*. 2026. Published online ahead of print.
9. *Kneitel R‡, Lee K, **Kreif N**. Health care resource utilization and costs in patients with acute myeloid leukemia treated with posttransplant maintenance therapy. *Journal of Managed Care & Specialty Pharmacy*. 2026;32(8):932–944.
8. Counts NZ, **Kreif N**, Creedon TB, Bloom DE. Psychological distress in adolescence and later economic and health outcomes in the United States population: A retrospective and modeling study. *PLOS Medicine*. 2025;22(1):e1004506.
7. Miners A, Phillips A, **Kreif N**, Rodger A, Speakman A, Fisher M, Anderson J, Collins S, Hart G, Sherr L, Lampe FC. Health-related quality-of-life of people with HIV in the era of combination antiretroviral treatment: a cross-sectional comparison with the general population. *The Lancet HIV*. 2014;1(1):e32–e40.
6. Stull DE, Wasiak R, **Kreif N**, Raluy M, Colligs A, Seitz C, Gerlinger C. Validation of the SF-36 in patients with endometriosis. *Quality of Life Research*. 2014;23(1):103–117.
5. Ishak KJ, **Kreif N**, Benedict A, Muszbek N. Overview of Parametric Survival Analysis for Health-Economic Applications. *PharmacoEconomics*. 2013;31(8):663–675.
4. Muszbek N, **Kreif N**, Valderrama A, Benedict A, Ishak J, Ross DP. Modelling survival in hepatocellular carcinoma. *Current Medical Research and Opinion*. 2012;28(7):1141–1153.
3. Calvo Aller E, Maroto P, **Kreif N**, González Larriba JL, López-Brea M, Castellano D, Martí B, Díaz Cerezo S. Cost-effectiveness evaluation of sunitinib as first-line targeted therapy for metastatic renal cell carcinoma in Spain. *Clinical and Translational Oncology*. 2011;13(12):869–877.
2. Lux MP, Wöckel A, Benedict A, Buchholz S, **Kreif N**, Harbeck N, et al. Cost-Effectiveness Analysis of Anastrozole versus Tamoxifen in Adjuvant Therapy for Early-Stage Breast Cancer – A Health-Economic Analysis Based on the 100-Month Analysis of the ATAC Trial and the German Health System. *Onkologie*. 2010;33(4):155–166.

1. Järbrink K, **Kreif N**, Benedict A, Locklear J. Quality of life and drug costs associated with switching antipsychotic medication to once-daily extended release quetiapine fumarate in patients with schizophrenia. *Current Medical Research and Opinion*. 2009;25(3):709–716.

Submitted manuscripts

3. Nwogu IB‡, **Kreif N**, Khan HM, Etzioni R, Carlson JJ. Comparative effectiveness of lutetium Lu-177 vipivotide tetraxetan versus cabazitaxel in patients with metastatic castration-resistant prostate cancer. Submitted to *International Journal of Cancer*.
2. Lordemus S, Jacob N, Jacobs R, Suhrcke M, **Kreif N**, Cleary S, Myers-Franchi B, Mutyambizi-Mafunda V. Depression symptoms, employment, and household economic outcomes: evidence from the MIND-ECON trial in South Africa. Submitted to *World Development*.
1. Bennett A, **Kreif N**, Manca A. Evaluating the effect of time-varying erythropoiesis-stimulating agents treatment policies on overall survival in lower-risk myelodysplastic syndromes: a target trial emulation within the EUMDS registry. Submitted to *Haematologica*.

Manuscripts in preparation

Causal machine learning for health policy evaluation

6. *__Kreif N__, Basu A. Comparative evaluation of machine learning methods for personalized treatment allocation based on randomized controlled trial data.
5. Hatamyar J‡, **Kreif N**, Huber M, Rocha R. Machine learning in difference-in-differences with staggered treatment timing: a case study of a primary health care reform in Brazil (working title).

Global health policy

4. McGuire F‡, **Kreif N**, Chirwa G, Manthalu G, Smith P. A solution looking for a problem: the effect of maternity waiting homes on health care utilisation and child health outcomes.

Applications in health economics and outcomes research

3. *__Kreif N__, Manca A, Salanti G, Zhang Y, Bennett A, Sirthola P, et al. The promise and challenges for machine learning in analysing real world data for health technology assessment.
2. Jang J‡, **Kreif N**, Lee K. Healthcare utilization and cost burden with switching or cycling after starting anti-tumor necrosis factors in inflammatory bowel disease: a retrospective cohort analysis.
1. Cotterill A‡, **Kreif N**, Lee K. Healthcare resource utilization and costs among patients with essential tremor.

Working papers in the public domain

7. Lordemus S, Jacob N, Suhrcke M, Jacobs R, Cleary S, Mutyambizi-Mafunda V, **Kreif N**, Myers B. Depression symptoms, employment, and household economic outcomes: evidence from the MIND-ECON trial in South Africa. SSRN preprint, 2026. (Submitted to World Development.)
6. Cussens J, Hatamyar J‡, Shah V‡, **Kreif N**. Fast learning of optimal policy trees. arXiv:2506.15435, 2025. (Submitted to Journal of Machine Learning Software.)
5. *Shah V‡, Hatamyar J‡, Hidayat T, **Kreif N**. Exploring the heterogeneous impacts of Indonesia's conditional cash transfer scheme (PKH) on maternal health care utilisation using instrumental causal forests. arXiv:2501.12803, 2025. (Published in Empirical Economics.)
4. Hatamyar J‡, **Kreif N**, Rocha R, Huber M. Machine learning for staggered difference-in-differences and dynamic treatment effect heterogeneity. arXiv:2310.11962, 2023.
3. *Hatamyar J‡, **Kreif N**. Policy learning with rare outcomes. arXiv:2302.05260, 2023.
2. *__Kreif N__, Mirelman A, Moreno Serra R, Hidayat T, DiazOrdaz K, Suhrcke M. Who benefits from health insurance? Uncovering heterogeneous policy impacts using causal machine learning. CHE Research Pa-

per, Centre for Health Economics, University of York, 2020. (Published in Health Services and Outcomes Research Methodology.)

1. *__Kreif N__, Sofrygin O, Schmittdiel J, Adams A, Grant R, Zhu Z, van der Laan M, Neugebauer R. Evaluation of adaptive treatment strategies in an observational study where time-varying covariates are not monitored systematically. arXiv:1806.11153, 2018. (Published in Biometrics.)

Invited editorials, notes, and peer-reviewed book chapters

5. *Hatamyar J[‡], **Kreif N**. Machine Learning for Causal Inference: Opportunities and Pitfalls. In: Oxford Research Encyclopedia of Economics and Finance. 2026.
4. Powell-Jackson T, O'Neill S, **Kreif N**. Difference-in-differences. In: Colbourn T, Hargreaves J, eds. Evaluating Public Health Interventions. UCL Press. 2026 (in press).
3. *__Kreif N__. Learning From an Association Analysis Using Propensity Scores. *Pediatric Critical Care Medicine*. 2021;22(12):1088–1092.
2. Shah V[‡], **Kreif N**, Jones AM. Machine learning for causal inference: estimating heterogeneous treatment effects. In: Handbook of Research Methods and Applications in Empirical Microeconomics. 2021.
1. *__Kreif N__, DiazOrdaz K. Machine Learning in Policy Evaluation: New Tools for Causal Inference. In: Oxford Research Encyclopedia of Economics and Finance. 2019.

Software

2025 **fastpolicytree** (R package, CRAN, version 1.0). Constructs optimal policy trees from covariates and doubly robust reward estimates; faster than the `policytree` package when covariates are discrete. Developed by James Cussens within the MRC-funded Tailoring project (principal investigator: Kreif); methods in Cussens, Hatamyar, Shah and Kreif (2025), arXiv:2506.15435.

Research grants

Principal investigator on 4 and co-investigator on 7 externally funded projects.

Current

2026–2027 *Principal investigator.* **MQ Foundation Fellowship in Economics and Mental Health Research. Kreif N (PI)**. Kennedy Forum, $100,000.

2026–2027 *Principal investigator.* **Development of a generative machine-learning model to simulate trajectories of patients with chronic lymphocytic leukemia. Kreif N (PI)**. Clever Access S.A. (service agreement), $6,154.

Completed

2022–2024 *Co-investigator.* **NIHR Global Health Research Unit on health financing for UHC in challenging times: leaving no-one behind.** Suhrcke M (PI), Moreno Serra R, ..., **Kreif N**, Muzumdar S, Walker S, et al. National Institute for Health and Care Research (NIHR), NIHR133252, £6,987,000. (unit funded 2022–2027; participation until March 2024.)

2022–2023 *Co-investigator.* **Developing a rapid AI-based policy probing and observational research tool.** Tiffin P (PI), **Kreif N**, Paton L, Aylott L. Wellcome Trust, Mental Health Data Prize (Round 1), £40,000.

2020–2022 *Co-investigator.* **BRAVE: COVID-19, social distancing and violence against women in Brazil.** Moreno Serra R (PI), **Kreif N**, Lordemus S. Medical Research Council, UKRI GCRF/Newton Fund, £107,406.

2020–2023 *Principal investigator.* **Tailoring health policies to improve outcomes using machine learning, causal inference and operations research methods. Kreif N (PI)**, Cussens J. Medical Research Council, New Investigator Research Grant, MR/T04487X/1, £407,366.

2019–2021 *Co-investigator.* **The causal impact of mental health on economic outcomes: evidence from a mental health intervention for chronic disease patients (MIND_ECON).** Jacobs R (PI), **Kreif N**, Mirelman A, Suhrcke M, Villasenor-Lopez A. Medical Research Council, MC_PC_MR/S007946/1, £137,965.

2019–2023 *Co-investigator.* **HTx: Next Generation Health Technology Assessment.** Manca A (PI), Iglesias Urrutia CP, **Kreif N**, Rothery C, Smith AG, Yu G. European Commission, Horizon 2020, £778,588.

2018–2020 *Co-investigator.* **War and peace: the health consequences of conflict in Colombia.** Moreno Serra R (PI), Caspersen N, **Kreif N**, Mirelman A, Suhrcke M. Medical Research Council, MR/R013667/1, £379,068.

2017–2020 *Co-investigator.* **GHE2: The economics and econometrics of global health systems, programmes and policies.** Suhrcke M (PI), Chalkley MJ, Cookson RA, **Kreif N**, Mirelman A, Moreno Serra R, Palmer SJ, Revill P, Rice N, Sculpher M. NIHR Global Health Research Fellowship, £1,111,624.

2014–2017 *Principal investigator.* **Improving statistical methods to address confounding in the economic evaluation of health interventions (Early Career Fellowship in the Economics of Health). Kreif N (PI)**. Medical Research Council, MR/L012332/1, £251,171.

Teaching

Graduate courses (master's and PhD)

2024– **Course master** (2026–), Application of Machine Learning in Health Economics and Outcomes Research, The CHOICE Institute, University of Washington. Previously co-course master (2025) and guest lecturer (2024)

2026– **Graduate seminar leader**, The CHOICE Institute, University of Washington

2025– **Key faculty** (2026–), Certificate in Data Science Methods for Real-World Evidence in Health, School of Pharmacy, University of Washington. Previously guest lecturer (2025)

2011–2016 **Graduate teaching assistant**, Introduction to Health Economics (MSc in Public Health), LSHTM

2011–2016 **Graduate teaching assistant**, Economic Evaluation (MSc), LSHTM

Short courses and workshops

2026 SMDM virtual short course: Causal Machine Learning for Health Economics and Decision Making (November 2026)

2026 ISPOR virtual short course: Causal Machine Learning for Health Economics and Outcomes Research (June 2026)

2025 Invited 2.5-hour workshop: Machine Learning for Health Policy Evaluation, European Health Economics Association Early Career Researcher forum (over 100 participants)

2024 ISPOR virtual short course: Causal Machine Learning for Health Economics and Outcomes Research (July 2024)

2022 Designed and led a four-hour short course: Machine Learning for Causal Inference (Health Economics Study Group meeting, June 2022; Centre for Health Economics, July 2022; Norwegian Research Centre (NORCE), October 2022)

2019 Introduction to Econometric Methods for Policy and Program Evaluation (2 lectures), Wits School of Public Health, South Africa

2019 Advanced Statistical Modelling for Economic Evaluation (2 lectures and 1 computer practical), University of York

2018 Performance Assessment and Multilevel Modelling (2 lectures and 2 computer practicals), Marie Skłodowska-Curie Actions Innovative Training Network, Hamburg

2011–2016 Methods for Addressing Selection Bias in Health Economic Evaluation (2-day course at LSHTM; 1-day pre-conference courses at ISPOR Europe)

Undergraduate

2007–2008 Instructor of Econometrics, Rajk László College for Advanced Studies, Hungary

2006 Seminar leader, Introductory Microeconomics, International Business School, Budapest

Mentoring

PhD students: current

2026– Zilin Cheng: "Genomic risk information in colorectal cancer screening: a decision-analytic framework for polygenic risk thresholds and screening response to monogenic risk disclosure" (**thesis committee member**)

2024– Emily Callen: "Evaluating the effectiveness of state HIV pre-exposure prophylaxis drug assistance programs" (**thesis committee member**)

2021– Nadine Kraamwinkel-Jha (University of Gothenburg): "Overcoming the plateau in public health and development in low- and middle-income countries: analyzing heterogeneity and effects of policies and interventions" (**50% supervisor**)

PhD students: completed

2024–2026 Ben Nwogu: "Evaluating newer therapies in the treatment of metastatic prostate cancer" (**thesis committee member**). Dissertation approved 2026

2019–2023 Vishalie Shah: "Machine learning methods in health policy evaluation" (**50% supervisor**). Thesis awarded

2019–2023 Daniela Rodrigues (Imperial College London): "Evaluation of digital-first models of care using routinely collected data" (**4th supervisor**). Thesis awarded

2018–2022 Finn McGuire: "Methods to evaluate health policies in low- and middle-income countries" (**50% supervisor**, with Peter Smith). Thesis awarded

2017–2021 Leonardo Koeser (King's College London): "Methods to evaluate the causal effects of psychiatric interventions using observational data" (**3rd supervisor**). Thesis awarded

Master's students

2026 Griffen Allen, MSc in Health Systems and Population Health, University of Washington: "Is the non-operative management of appendicitis cost effective? A Markov-based analysis of the Comparison of Drugs and Appendectomy (CODA) trial" (**committee co-chair**)

2025–2026 Andrew Cotterill, MSc in HEOR, University of Washington: "Healthcare resource utilization and costs among patients with essential tremor" (**committee chair**)

2025–2026 Janice Jang, MSc in HEOR, University of Washington: "Healthcare utilization and cost burden with switching or cycling after starting anti-tumor necrosis factors in inflammatory bowel disease: a retrospective cohort analysis" (**committee member**)

2024–2025 Rachel Kneitel, MSc in HEOR, University of Washington: "Healthcare resource utilization and costs in patients with AML treated with post-transplant maintenance therapy" (**committee chair**)

2021 Julio Mieses Ramirez, MSc in Health Economics, University of York (**dissertation advisor**)

2019 Aliah Sagar and Gabriel Torres, MSc in Health Economics, University of York (**dissertation advisor**)

2018 Silvia Moler Zapata, MSc in Health Economics, University of York (**dissertation advisor**): "Estimating the health effects of expansions in health expenditure in Indonesia: a dynamic panel data approach." Published as Moler-Zapata et al. (2022)

2017 Sangjun Kim, MSc in Health Economics, University of York (**dissertation advisor**): "From impact evaluation to decision-analysis: assessing the extent and quality of evidence on 'value for money' in health impact evaluations in low- and middle-income countries." Published as Kreif et al. (2021)

Postdoctoral researchers

2020–2023 Julia Hatamyar, postdoctoral research fellow on the MRC New Investigator Research Grant, Centre for Health Economics, University of York (**line manager and academic supervisor**)

I was also line manager and academic supervisor of other postdoctoral researchers at the Centre for Health Economics, University of York.

Service

National and international panels and task forces

2023–2024 Panel member, UKRI Better Methods Better Research Panel

2021–2024 Panel member, UK Medical Research Council Artificial Intelligence for Better Biomedical and Health Research

2022 Member, ISPOR Machine Learning Methods in Health Economics and Outcomes Research Task Force (PALISADE checklist, *Value in Health* 2022)

2019 Panel member, UK Centre of Excellence for Development Impact and Learning (CEDIL)

Member, The Kennedy Forum Economics Committee (a US non-profit organization focused on system-level change in mental health and substance use care)

University of Washington

2026– CHOICE MS Program Work Group

2025– CHOICE Curriculum Committee

2025– CHOICE PhD Student Admission Committee

2025– School of Pharmacy Workload Task Force

2024–2025 Co-director, UW CHOICE HEOR AbbVie Fellowship

2024– Faculty advisor, UW ISPOR Student Chapter

2024– Faculty advisor, CHOICE Data Science Journal Club

2024– Coordinator, CHOICE PhD student and faculty coffee hours

Grant reviewing

Grant proposal reviewer for: Medical Research Council; NIHR Health Technology Assessment Programme; Hungarian National Research, Development and Innovation Office; College of Experts for the DHSC/UKRI COVID-19 Rapid Response Rolling Call; Health Foundation; Swiss National Science Foundation; University of Washington Royalty Research Fund; NASA Human Research Program; Israel Science Foundation.

Grant report reviewer for the Patient-Centered Outcomes Research Institute (PCORI).

Invited reviewer for the Pedro Pita Barros Award, Portuguese Association of Health Economics (APES).

Peer review

Referee for: Medical Decision Making, PharmacoEconomics, Value in Health, Applied Health Economics and Health Policy, American Journal of Epidemiology, Epidemiology, Health Economics, Journal of Health Economics, Empirical Economics, Statistics in Medicine, Statistical Science, Social Science & Medicine, BMJ Open, Sociological Methods & Research, Health Policy and Planning, JRSS-A, JRSS-B, PNAS, Rapid Reviews: COVID-19, Nature Human Behaviour, Econometrics Journal, Biometrical Journal, Journal of Econometrics, BMC Medical Research Methodology, Data & Policy, Review of Economic Studies.

Abstract reviewer for: AcademyHealth (2026), SMDM Annual Meeting (2026), Hungarian Health Economics Annual Meeting (2026), European Causal Inference Meeting (2018–2025), iHEA World Congress (2020).

Organization of conferences and workshops

2025–	Educational Committee, Society for Causal Inference Conference
2025	Scientific Committee, Society for Causal Inference Conference (Detroit)
2023	Main organizer, Symposium on Machine Learning for Causal Inference in the Health and Social Sciences (London, UK)
2018–2024	Steering group member, European Causal Inference Meeting
2018	Organizing committee member, Health Economics Study Group meeting (York, UK)

Chairing conference sessions

2026	Chair and discussant, "New frontiers in causal inference: clinical, equity and policy evaluations", AcademyHealth Annual Research Meeting, Seattle

University of York

2017–2023	CHE Fellowship Committee member (2017–2022) and chair (2022–2023)
2017–2023	University of York Computing Committee member
	Hiring committee member for postdoctoral research fellows

Invited talks

Titles of talks before 2016 omitted.

40. **Stanford University, Department of Health Policy Seminar Series** (Stanford, CA, November 13, 2026)
Better estimates, better decisions? Individualizing treatment with conditional average treatment effects from randomized trials
39. **PriMHE Programme in the Methods of Health Economics lecture series, University of Vienna** (invited online lecture, September 2026)
(Causal) machine learning for decision modeling
38. **Frontiers in Causal Modeling: SMDM–ISPOR panel**, SMDM 48th Annual Meeting (Oslo, Norway, 2026) (invited panelist)
(Causal) machine learning for decision modeling

37. **Rajk College Neumann Jubilee Conference, Corvinus University** (Budapest, Hungary, 2026) (invited keynote speaker)
    How does the work of Neumann laureates inform data-driven health policy evaluation?
36. **Tufts Center for the Evaluation of Value and Risk in Health** (virtual, May 2025) (invited seminar speaker)
    Informing treatment stratification using causal machine learning and decision modeling
35. **Skaggs School of Pharmacy and Pharmaceutical Sciences** (Colorado, March 2025) (invited seminar speaker)
    Informing treatment stratification using causal machine learning and decision modeling
34. **Spanish Health Economics Association Conference** (Tenerife, Spain, 2024) (speaker in invited session)
    Policy learning with rare outcomes
33. **German Health Economics Association** (invited seminar presentation)
    Machine learning in health economics and outcomes research: opportunities and some key challenges
32. **Horizontal Initiative on Causal Inference of the German Society for Epidemiology** (Mainz, Germany, November 2023) (invited keynote speaker)
31. **CHOICE Institute (University of Washington) annual symposium: Artificial Intelligence, Real Consequences: The Side Effects of AI in Healthcare** (Seattle, October 2023) (panelist)
    Machine learning to answer causal questions: how to avoid misleading interpretation?
30. **Hungarian Economic Association Conference** (Hungary, December 2022) (keynote lecture)
    Data-driven health policy making
29. **Harvard Center for Health Decision Science Seminar** (Boston, October 2022)
    Learning optimal treatment rules using machine learning and decision modeling
28. **University of East Anglia, Economics Department Seminar** (UK, 2022)
    Policy learning with rare outcomes
27. **Stanford AI + Health Conference** (2021) (panelist)
    Machine learning for causal inference (in health economics and beyond)
26. **Virtual ISPOR Europe Conference** (2021) (panelist)
    Machine learning for causal inference
25. **Rajk László College Alumni Conference** (Budapest, Hungary, 2021)
    Using machine learning in the impact evaluation of health policies
24. **UCL Department of Statistical Science Seminar** (January 2021)
    Who benefits from health insurance? Uncovering heterogeneous policy impacts using causal machine learning
23. **Royal Statistical Society Interpretable Machine Learning & Causal Inference workshop** (December 2020)
    Using causal machine learning to explore heterogeneous responses to policies
22. **Nuremberg Economics Seminar** (Germany, 2020)
    Who benefits from health insurance? Uncovering heterogeneous policy impacts using causal machine learning
21. **Essen Virtual Health Economics Seminar** (Germany, 2020)
    Who benefits from health insurance? Uncovering heterogeneous policy impacts using causal machine learning
20. **University of Lancaster Health Economics Seminar** (December 2019)
    Examining effect heterogeneity using machine learning: the example of health insurance in Indonesia
19. **MRC Biostatistics Unit 17th Armitage Workshop** (November 2019)
    An application of causal forests to explore the heterogeneous effects of social health insurance

18. **University of Glasgow Institute of Health and Wellbeing: "What next for natural experimental studies?" expert workshop** (November 2019)
    Examining effect heterogeneity using machine learning: the example of health insurance in Indonesia
17. **University of Newcastle Health Economics Seminar** (October 2019)
    An application of causal machine learning approaches to explore heterogeneous treatment effects of social health insurance
16. **Centre for Statistical Methodology Seminar, LSHTM** (September 2019)
    Contrasting targeted learning and causal forests for inference about conditional average treatment effects of social health insurance programmes
15. **University of Glasgow Maurice Bloch Seminar** (June 2019)
    Using machine learning in policy evaluation
14. **University of Manchester HOPE Seminar** (June 2019)
    Machine learning in policy evaluation: new tools for causal inference
13. **Hungarian Institute for Economic Research** (Hungary, 2019)
    An application of causal machine learning approaches to explore heterogeneous treatment effects of social health insurance
12. **INAHEA (Indonesian Health Economics Association) Conference** (Indonesia, 2018) (plenary speaker)
    The impact of health insurance expansion on infant mortality in Indonesia
11. **University of California Davis, Biostatistics Seminar** (USA, 2016)
    Estimating the comparative effectiveness of longitudinal treatment interventions: an application in pediatric intensive care
10. **University of California San Francisco, Biostatistics Seminar** (USA, 2016)
    Estimating the comparative effectiveness of longitudinal treatment interventions: an application in pediatric intensive care
9. **Royal Statistical Society International Conference** (invited session "Data Science: Applications of Machine Learning in Biostatistics")
    Estimating the comparative effectiveness of longitudinal treatment regimes: an application of targeted maximum likelihood estimation in critical care
8. **Toronto Health Economics and Technology Assessment (THETA) Collaborative Seminar** (Canada, 2015)
7. **University College London, Department of Statistical Science Seminar** (UK, 2015)
6. **University of Warwick Health Economics Journal Club** (UK, 2014)
5. **Centre for Health Economics Research and Evaluation Seminar, UTS** (Sydney, Australia, May 2014)
4. **University of York Centre for Health Economics Seminar** (UK, 2014)
3. **University of Manchester Econometrics Group Seminar** (UK, 2013)
2. **Health Econometrics and Data Group Seminar, University of York** (UK, 2013)
1. **Causal Inference Discussion Group, Harvard School of Public Health** (USA, 2011)

Selected contributed conference presentations

Poster or oral presentation as presenting author.

21. **SMDM 48th Annual Meeting** (Oslo, Norway, 2026) (oral presentation in contributed session)
    Choosing machine learning methods to maximize treatment classification accuracy in RCTs
20. **15th Annual Conference of the American Society of Health Economists (ASHEcon)** (Minneapolis, 2026) (oral presentation in organized session)
    Choosing machine learning methods to maximize treatment classification accuracy in RCTs
19. **14th Health Economics Methodology Meeting** (Vancouver, 2026) (discussion paper)
    Choosing machine learning methods to maximize treatment classification accuracy in RCTs
18. **13th Annual Conference of the American Society of Health Economists (ASHEcon)** (San Diego, 2024) (oral presentation in organized session)
    Policy learning with rare outcomes
17. **SMDM 46th Annual Meeting** (Boston, 2024) (panelist in workshop "Decision-analytic and machine learning tools in healthcare decision making: a debate on their acceptability in clinical practice, treatment guidelines, and health technology assessment")
    Informing treatment stratification using machine learning
16. **ISPOR Europe** (Barcelona, Spain, 2024) (discussant, alongside Florent Guelfucci (discussion leader) and Imke Mayer)
    Use of machine learning techniques to create external control arms: guidance for submissions to health technology assessment
15. **ISPOR Europe** (Copenhagen, Denmark, 2023) (panelist in workshop)
    The role of machine learning in HTA: the academic's perspective
14. **European Causal Inference Meeting (EuroCIM)** (2023) (oral presentation)
    Policy learning with rare outcomes
13. **American Causal Inference Conference** (Berkeley, 2022) (poster)
12. **Hungarian Economic Association Conference** (2021) (oral presentation)
    An application of causal forests to explore the heterogeneous effects of social health insurance
11. **International Health Economics Association (iHEA) Congress** (Basel, 2019)
    Value for money assessment in impact evaluations
10. **Annual Conference of the American Society of Health Economists (ASHEcon)** (Philadelphia, 2016) (oral presentation)
    Generalized synthetic controls: a critical examination of a method new to the health context. Also discussant of "Do financial penalties reduce readmission rates? A continuous treatment effect evaluation"
9. **UK Causal Inference Meeting** (London, 2016) (oral presentation)
    Estimating the comparative effectiveness of longitudinal treatment regimes: an illustration of targeted maximum likelihood estimation in critical care
8. **International Health Economics Association (iHEA) Congress** (Milan, 2015)
    Health econometric evaluation of the effects of a continuous treatment: a machine learning approach
7. **Atlantic Causal Inference Conference** (Philadelphia, 2015) (poster)
6. **Atlantic Causal Inference Conference** (2014) (poster)
5. **European Health Econometrics Workshop** (Munich, Germany, 2014)
    Health econometric evaluation of the effects of a continuous treatment: a machine learning approach
4. **Annual Conference of the American Society of Health Economists (ASHEcon)** (Los Angeles, 2014) (oral presentation)
    Synthetic control method with multiple treated units: application to the Advancing Quality Program

3. **Joint Statistical Meetings (JSM)** (Montreal, 2013) (oral presentation)
2. **Society for Medical Decision Making Conference** (Chicago, 2012) (oral presentation)
   Comparison of double-robust methods for cost-effectiveness analysis
1. **ISPOR Europe** (Madrid, 2011) (oral presentation in a workshop)

Published conference abstracts

23. Cotterill A[‡], **Kreif N**. MSR109 Determining an economically justifiable price for trontinemab in early Alzheimer's disease. *Value in Health*. 2026;29(6):S319.
22. Kneitel R[‡], Lee K, **Kreif N**. CO69 Healthcare resource utilization and costs in patients with AML treated with post-transplant maintenance therapy. *Value in Health*. 2026;29(6):S34–S35.
21. Nwogu IB[‡], **Kreif N**, Khan H, Etzioni R, Carlson JJ. EE46 Cost-effectiveness of abiraterone, apalutamide, enzalutamide, and docetaxel doublets for metastatic hormone-sensitive prostate cancer: a real-world evidence analysis. *Value in Health*. 2026;29(6):S72.
20. Nwogu IB[‡], **Kreif N**, Khan H, Etzioni R, Carlson JJ. CO24 Real-world comparative effectiveness of lutetium-177-PSMA-617 versus cabazitaxel for metastatic castration-resistant prostate cancer. *Value in Health*. 2026;29(6):S24–S25.
19. Nwogu IB[‡], **Kreif N**, Khan HM, Etzioni RD, Carlson JJ. Real-world comparative effectiveness of novel doublet therapies for metastatic hormone-sensitive prostate cancer. *Journal of Clinical Oncology*. 2026;44(7_suppl):70.
18. Kneitel R[‡], **Kreif N**. EE84 Cost-Effectiveness Analysis of Xanomeline and Trospium Chloride for Schizophrenia in the United States. *Value in Health*. 2025;28(6):S77.
17. Gallinaro J, Shah V[‡], Lee H, **Kreif N**, Guerra I. P23 Integrating Machine Learning and Propensity Score-Based Methods for Making Causal Inferences From Real-World Data. *Value in Health*. 2024;27(12):S6.
16. Glynn D, Hatamyar J[‡], Giardina J, Pandya A, **Kreif N**. Identifying equity constrained subgroups using machine learning, decision modelling and optimal policy algorithms. *Medical Decision Making*. 2024;44(2):NP193–NP196.
15. Glynn D, **Kreif N**, Hatamyar JF, Pandya A, Giardina J. Integrating machine learning estimates of heterogeneous treatment effects and decision modelling. *Society for Medical Decision Making (SMDM) Annual Meeting, Seattle*. 2022.
14. Bennett A, **Kreif N**, Manca A. MSR52 Target Trial Emulation (TTE) for Real World Data Analyses to Support HTA Decisions. *Value in Health*. 2022;25(12):S359–S360.
13. Zhang Y, **Kreif N**, Gc V, Manca A. MSR53 A Review of Methods for Estimating Individual Treatment Effect From Real World Data for Use in Health Technology Assessment: Separating Hype From Reality. *Value in Health*. 2022;25(12):S360.
12. Zhang Y, **Kreif N**, Gc V, Bennett A, Manca A. EE147 Estimating the Causal Effect of Early Use of Erythropoietic Stimulating Agents in Intermediate-1 to Low-Risk MDS Patients: An Application of the Longitudinal Targeted Maximum Likelihood Estimation. *Value in Health*. 2022;25(12):S81.
11. Jacob N, **Kreif N**, Lordemus S, Suhrcke M, Jacobs R, Myers B, Mafunda V, Cleary S. The causal impact of mental health on economic outcomes in South Africa: employment, income, out of pocket payments for healthcare, and household expenditure. *Journal of Mental Health Policy and Economics*. 2022;25:S17.
10. Diaz MD, Rocha F, Pereda P, **Kreif N**, Lordemus S, Moreno-Serra R. Evidence from developing countries on COVID-19 lockdowns and violence against women: a literature review. *iHEA World Congress on Health Economics*. 2021.
9. Pereda P, Diaz MD, Rocha F, **Kreif N**, Lordemus S, Moreno-Serra R, Arabe IB, Oliveira PA, Cavalcanti F. COVID-19 lockdowns and violence against women in Brazil. *iHEA World Congress on Health Economics*. 2021.

8. Ciminata G, Geue C, Wu O, Deidda M, **Kreif N**, Langhorne P. PND96 Comparison of propensity score methods: a case study of direct oral anticoagulants. *Value in Health*. 2019;22:S755.
7. Lampe F, Miners A, **Kreif N**, Miltz A, Phillips A, Sewell J. Comparison of depression and anxiety between HIV-positive and HIV-negative people. *22nd International AIDS Conference, Amsterdam*. 2018.
6. Ciminata G, Geue C, Wu O, Deidda M, **Kreif N**, Langhorne P. Comparative Effectiveness of Non-Vitamin K Antagonist Oral Anticoagulants (NOACS) And Warfarin In The Scottish Atrial Fibrillation Population: The Value of Real World Evidence. *Value in Health*. 2017;20(9):A603.
5. Wasiak R, Filonenko A, Stull DE, **Kreif N**, Raluy M, Ryan J, Jeddi M, Uhl-Hochgräber K, Vanness DJ. PIH40 Methodological considerations when assessing work productivity (WP) and activities of daily living (ADL) outcomes in multinational clinical trials in women with heavy and/or prolonged menstrual bleeding. *Value in Health*. 2010;13(7):A382.
4. Stull D, Wasiak R, **Kreif N**, Colligs A, Seitz C, Gerlinger C. PIH28 Validation of the SF-36 in patients with endometriosis. *Value in Health*. 2009;12(7):A295.
3. Wasiak R, **Kreif N**, Stull D, Tyas D. PCV79 Burden of illness study in patients with resistant hypertension in UK. *Value in Health*. 2009;12(7):A327.
2. **Kreif N**, Benedict Á, Lux M, Wöckel A, Klevesath M. PCN119 Cost effectiveness analysis of anastrozole versus tamoxifen in adjuvant therapy for early stage breast cancer based on the 100-month analysis of the ATAC trial from a German perspective. *Value in Health*. 2009;12(7):A279–A280.
1. Benedict A, Figlin RA, Charbonneau C, **Kreif N**, Hariharan S, Négrier S. Economic evaluation of sunitinib versus other new targeted therapies as first-line treatment of metastatic renal cell carcinoma (mRCC) in the United States. *Journal of Clinical Oncology*. 2009;27(15_suppl):e17556.