BIOGRAPHICAL SKETCH

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NAME: Jarvik, Jeffrey G.

eRA COMMONS USER NAME (credential, e.g., agency login): JARVIKJ

POSITION TITLE: Professor with Tenure of Radiology and Neurological Surgery; Adjunct Professor of Health Services, Pharmacy and Orthopedics & Sports Medicine

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
University of California, San Diego, CA	BA	12/1981	Biochem and Cell Biology
University of California, San Diego, CA	MD	06/1987	Medicine
Hospital of the University of Pennsylvania, PA	Residency	06/1992	Diagnostic Radiology
Hospital of the University of Pennsylvania, PA	Fellowship	06/1993	Neuroradiology
University of Washington, Seattle, WA	MPH	06/1995	Health Services

A. Personal Statement

As the Co-Director of the Comparative Effectiveness, Cost and Outcomes Research Center (CECORC) at the University of Washington (UW), I have led or collaborated on multiple observational and randomized controlled trials (RCTs) of devices and procedures. Equally importantly, I have training in health services research and study design. I was a Robert Wood Johnson Clinical Scholar at UW, where I earned my Masters in Public Health. I have focused my research on diagnostic imaging and therapeutic interventions, especially as they relate to the evaluation of low back pain.

As a PI as well as a co-investigator, I have had funding from a variety of entities including AHRQ, NIH, and PCORI. The projects include the Seattle Lumbar Imaging Project (SLIP), the Longitudinal Assessment of Imaging and Disability of the Back (LAIDBack), the Investigational Vertebroplasty Safety and Efficacy Trial (INVEST), the Back pain Outcomes using Longitudinal Data and the Lumbar Epidural Steroid Injections for Spinal Stenosis (LESS) trial, and the Lumbar Imaging with Reporting of Epidemiology (LIRE) project. I am currently Principal Investigator of our NIAMS P30 Core Center for Clinical Research (CCCR) called the UW Clinical Learning, Evidence And Research (CLEAR) Center for Musculoskeletal Conditions, a P30 center funded by NIAMS/NIH. A main goal of the CLEAR Center is to promote the translation of clinical data into research-ready data for musculoskeletal conditions.

My interests in both radiology and translating clinical information into research-ready data led to emphasizing health services research as part of the CLEAR Center. This work has led to a number of collaborations with faculty, post-docs and graduate students from multiple departments including Health Systems and Population Health, Biomedical Informatics and Medical Education (BIME) and Biostatistics, Computer Science as well as multiple clinical departments (Radiology, Orthopaedic Surgery & Sports Medicine, Physical Medicine and Rehabilitation, Rheumatology, and others). We have developed several machine learning and deep learning pipelines for projects that focus on predictive modeling and opportunistic screening. We plan to continue these fruitful collaborations for the foreseeable future.

a. **Jarvik JG**, Hollingworth W, Martin B, Gray DT, Emerson SS, Overman S, Robinson D, Staiger T, Wessbecher F, Sullivan SD, Kreuter W, Deyo RA. The Seattle Lumbar Imaging Project: A Randomized Controlled Trial of Rapid MR vs. Radiographs for Patients with Low Back Pain. JAMA; 289(21):2810-18, 2003. PMID: 12783911

b. Tan WL, Hassanpour S, Heagerty PJ, Rundell SD, Suri P, Huhdanpaa HT, James K, Carrell DS, Langlotz CP, Organ NL, Meier EN, Sherman KJ, Kallmes DF, Luetmer PH, Griffith B, Nerenz DR, **Jarvik JG.** *Comparison of Natural Language Processing Rules-Based and Machine-Learning Systems*

to Identify Lumbar Spine Imaging Findings Related to Low Back Pain. Academic Radiology. Acad Radiol. 2018 Mar 28. pii: S1076-6332(18)30121-1. PMID: 29605561

c. Dong Q, Luo G, Haynor D, O'Reilly M, Linnau K, Yaniv Z, **Jarvik JG**, Cross N. *DicomAnnotator: a Configurable Open-Source Software Program for Efficient DICOM Image Annotation.* J Digit Imaging. 2020 Jul 14. doi: 10.1007/s10278-020-00370-w. Online ahead of print. PMID: 32666365

d. **Jarvik JG,** Meier EN, James KT, Gold LS, Tan KW, Kessler LG, Suri P, Kallmes DF, Cherkin DC, Deyo RA, Sherman KJ, Halabi SS, Comstock BA, Luetmer PH, Avins AL, Rundell SD, Griffith B, Friedly JL, Lavallee DC, Stephens KA, Turner JA, Bresnahan BW, Heagert PJ. *The Effect of Including Benchmark Prevalence Data of Common Imaging Findings in Spine Image Reports: A Stepped-Wedge, Pragmatic Randomized Trial.* JAMA Netw Open. 2020; 3(9):e2015713. doi: 10.1001/jamanetworkopen.2020.15713

Ongoing and Completed Research Support Within Past 3 Years

P30 AR072572 (Jarvik-PI)   8/1/2022-7/31/2027
NIH/NIAMS: **UW Core Center for Clinical Research in Musculoskeletal Diseases**
The goal of this project is to develop and provide scientifically rigorous, state-of-the-art methods for transforming clinical data into research-quality data, and then actually providing that data.

R01 AG069891-01 (Rundell-PI) Role: Co-Investigator   9/30/2020-8/31/2025
NIH/NIAMS **Prognostic Subgroups for Personalizing Care & Treatments (PROSPECTS) Lumbar Stenosis**
The goal of this project is to develop a valid and accurate method for classifying older adults with pain associated with lumbar spinal stenosis based on prognosis.

R34 AR079098 (Jarvik- MPI)   9/1/2021-8/31/2023
NIH/NIAMS: **Investigative Kyphoplasty Efficacy and Safety Trial (INKTEST)**
The goal of this project is to design and plan the first properly blinded research clinical trial of Kyphoplasty which will in turn determine whether spine augmentation achieved through balloon kyphoplasty provides greater pain relief as compared to a "control intervention."

U01 HG010233-02 (Jarvik, Gail-PI) Role: Co-Investigator   9/21/2018-6/30/2022
NIH: **Pacific Northwest Undiagnosed Diseases Network (UDN) Clinic**
The goal of this project is to provide a diagnosis to patients who have undergone a protracted unsuccessful diagnostic odyssey and investigate the opportunities for scientific discovery that these unique patients offer.

ME-1507-31750 (Heagerty-PI) Role: Co-Investigator   8/1/2016-5/31/2020
PCORI: **Learning within Health Care Delivery Systems: Design, Analysis, and Interpretation of Longitudinal Cluster Randomized Trials**
The goal of this project is to provide the methods necessary for improved clinical research designs with robust inference methods.

UH3 AR066795-03 (Jarvik-PI)   1/01/2014-12/31/2019
NIH/NIAMS
A Pragmatic Trial of Lumbar Image Reporting with Epidemiology (LIRE)
The goal of this project is to determine the effectiveness of inserting epidemiological benchmarks into imaging reports at reducing subsequent tests and treatments.

PCORI Grant (Thompson-PI)   1/1/2016-12/31/2019
PCORI: **Patient-Centered Research for Standards of Outcomes in Diagnostic Tests (PROD)**
The goal of this project is to develop guidelines that will identify which patient-centered outcomes are most important to include in evaluations of tests.
Role: Co-Investigator

Complete List of Published Work: http://www.ncbi.nlm.nih.gov/pubmed/?term=jarvik+jg