

Accepted Manuscript

Machine Learning Methods to Extract Documentation of Breast Cancer Symptoms from Electronic Health Records

Alexander W. Forsyth, MEng, Regina Barzilay, PhD, Kevin S. Hughes, MD, Dickson Lui, MB ChB, Karl A. Lorenz, MD, Andrea Enzinger, MD, James A. Tulsky, MD, Charlotta Lindvall, MD, PhD

PII: S0885-3924(18)30082-4

DOI: [10.1016/j.jpainsymman.2018.02.016](https://doi.org/10.1016/j.jpainsymman.2018.02.016)

Reference: JPS 9733

To appear in: *Journal of Pain and Symptom Management*

Received Date: 16 November 2017

Revised Date: 15 February 2018

Accepted Date: 19 February 2018

Please cite this article as: Forsyth AW, Barzilay R, Hughes KS, Lui D, Lorenz KA, Enzinger A, Tulsky JA, Lindvall C, Machine Learning Methods to Extract Documentation of Breast Cancer Symptoms from Electronic Health Records, *Journal of Pain and Symptom Management* (2018), doi: 10.1016/j.jpainsymman.2018.02.016.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Machine Learning Methods to Extract Documentation of Breast Cancer Symptoms from Electronic Health Records

Alexander W. Forsyth, MEng¹; Regina Barzilay, PhD¹; Kevin S. Hughes, MD²; Dickson Lui, MB ChB³; Karl A. Lorenz, MD^{4,5}; Andrea Enzinger, MD^{6,7,8}; James A. Tulsky, MD^{7,8}; Charlotta Lindvall, MD, PhD^{7,8}

¹Department of Electrical Engineering and Computer Science, CSAIL, MIT, Cambridge, USA;

²Department of Surgical Oncology, Massachusetts General Hospital; ³Department of Medicine, Waitemata District Health Board, Auckland, New Zealand; ⁴Primary Care and Population Health, Department of Medicine, Stanford School of Medicine, Stanford, USA; ⁵VA Palo Alto Health Care System, Palo Alto, USA;

⁶Division of Population Sciences, Dana-Farber Cancer Institute, Boston, USA;

⁷Department of Psychosocial Oncology and Palliative Care, Dana-Farber Cancer Institute, Boston, USA;

⁸Division of Palliative Medicine, Department of Medicine, Brigham and Women's Hospital, Boston, USA

Address for correspondence:

Charlotta Lindvall, MD, PhD

Department of Psychosocial Oncology and Palliative Care

Dana-Farber Cancer Institute

450 Brookline Ave, LW670

Boston, MA 02215-5450

Phone: 617-582-9317

Fax: 617-632-6180

Email: Charlotta_lindvall@DFCI.harvard.edu

Running title: Machine learning based symptom identification

Word count: 2,983

Key words: Machine learning; natural language processing; patient-reported symptoms; electronic health record; breast cancer; palliative care

Download English Version:

<https://daneshyari.com/en/article/8605478>

Download Persian Version:

<https://daneshyari.com/article/8605478>

[Daneshyari.com](https://daneshyari.com)