

Understanding Patient-Reported Barriers to CRC Screening: A Literature Review

Kathryn Lang, MD MRCP FRCPath, Colin Small, Victoria M Raymond, MS, and Mark Jacobstein
Guardant Health, Inc., Redwood City, CA



Introduction

Colorectal cancer (CRC) is the **third-most commonly diagnosed cancer among American adults** and is estimated to cause the **second-most deaths** among all cancer types (Siegel, 2018). Globally, in 2018, there were 1.8 million new cases of CRC and approximately 861,000 deaths due to CRC (WHO)

Compliance with the guideline recommendations for CRC screening (United States Preventive Services Task Force (USPSTF), American Cancer Society (ACS)) remains low despite concentrated efforts to improve adherence

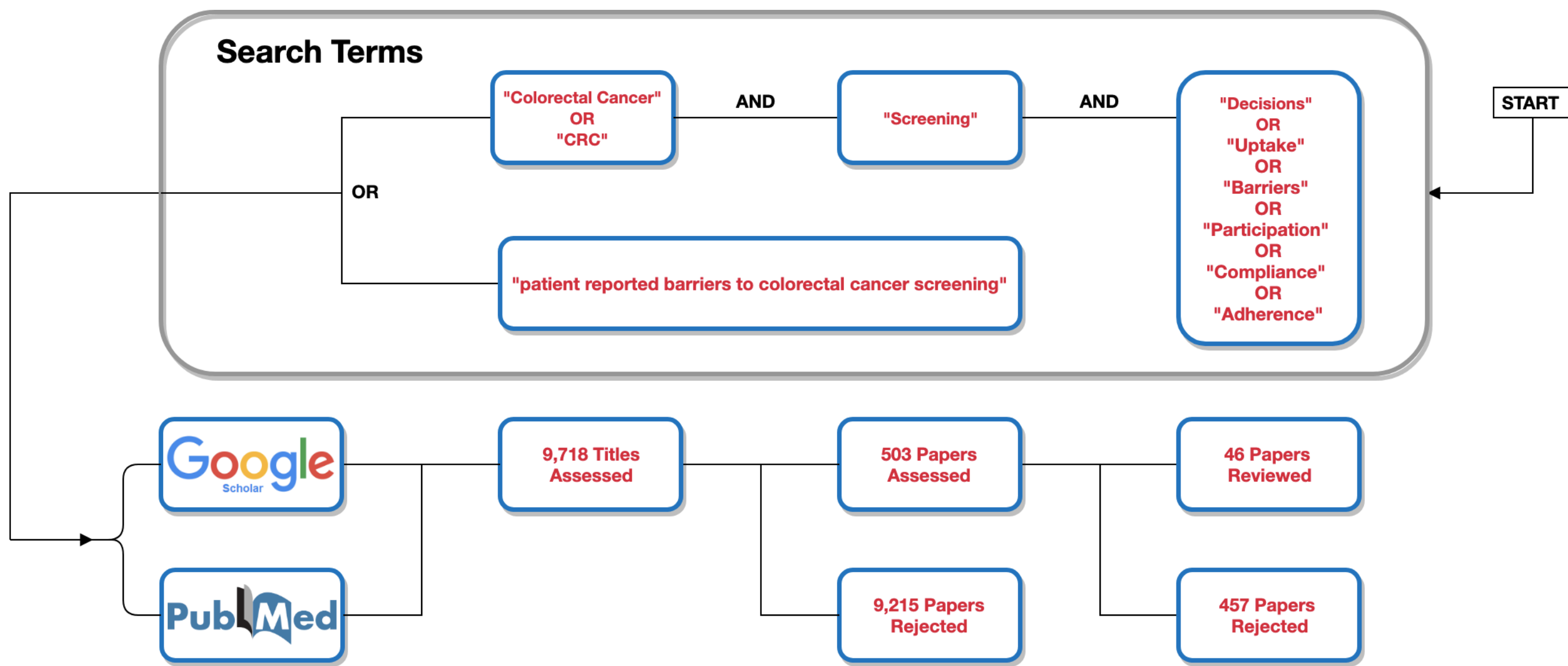
Clarifying the reasons why patients are non-compliant and defining patient reported barriers to the adherence to screening guidelines is crucial to the successful development and implementation of CRC screening programs

Methods

Review Process

- 1) Literature Review
- 2) Critical assessment of literature content
- 3) Codify responses
- 4) Categorize response codes

Search Process



Paper included if...

- Paper contains original research on patient reported barriers to CRC screening
- Patient population includes a majority of adults with no history of CRC
- Research survey quantifies patients' responses in order to rank the barriers

Paper excluded if...

- Paper focuses on elderly adults
- Health-provider reported barriers (we want to know why individual patients are not getting screened)

Results

Proposed Barrier Categories

Awareness

- "Never heard of the test"
- "Did not understand what colorectal cancer is"
- "Lack of education about CRC"
- "Unaware of test"
- "Not knowing where to get screened"
- "Don't know frequency at which to go for screening"
- "Didn't know it had to be done"

Lack of Time

- "Social burden and life circumstances"
- "Time/too busy/too inconvenient"
- "Had no time"
- "Competing priorities"
- "Test too time consuming"
- "Too busy to go/no time"
- "It takes too much time"
- "Competing priorities, including chronic conditions"

Cost

- "No insurance/cost"
- "Finances"
- "Had financial constraints"
- "Cost of test"
- "Test expensive"
- "Cost of further treatment, if screening is positive, too expensive"
- "Not having health insurance"

Logistics

- "Logistics"
- "No transportation"
- "Transportation to return site"
- "Limited return sites"
- "Return site hours of operation"
- "Access barriers"
- "Screening is inconvenient"
- "Transportation issues"
- "I did not have transportation"

Doctor Order

- "Doctor didn't order the test"
- "Primary care physician did not explain colonoscopy thoroughly"
- "PCP did not offer alternatives to colonoscopy"
- "Physician never recommended the test"
- "No clinician's recommendation"

Other

- "Don't know"
- "Other"
- "Unable to call, did not receive a call"
- "Laxative didn't work"
- "Language barriers"
- "Knowledge of someone harmed by the test"
- "Lack of motivation"
- "Forgetfulness"

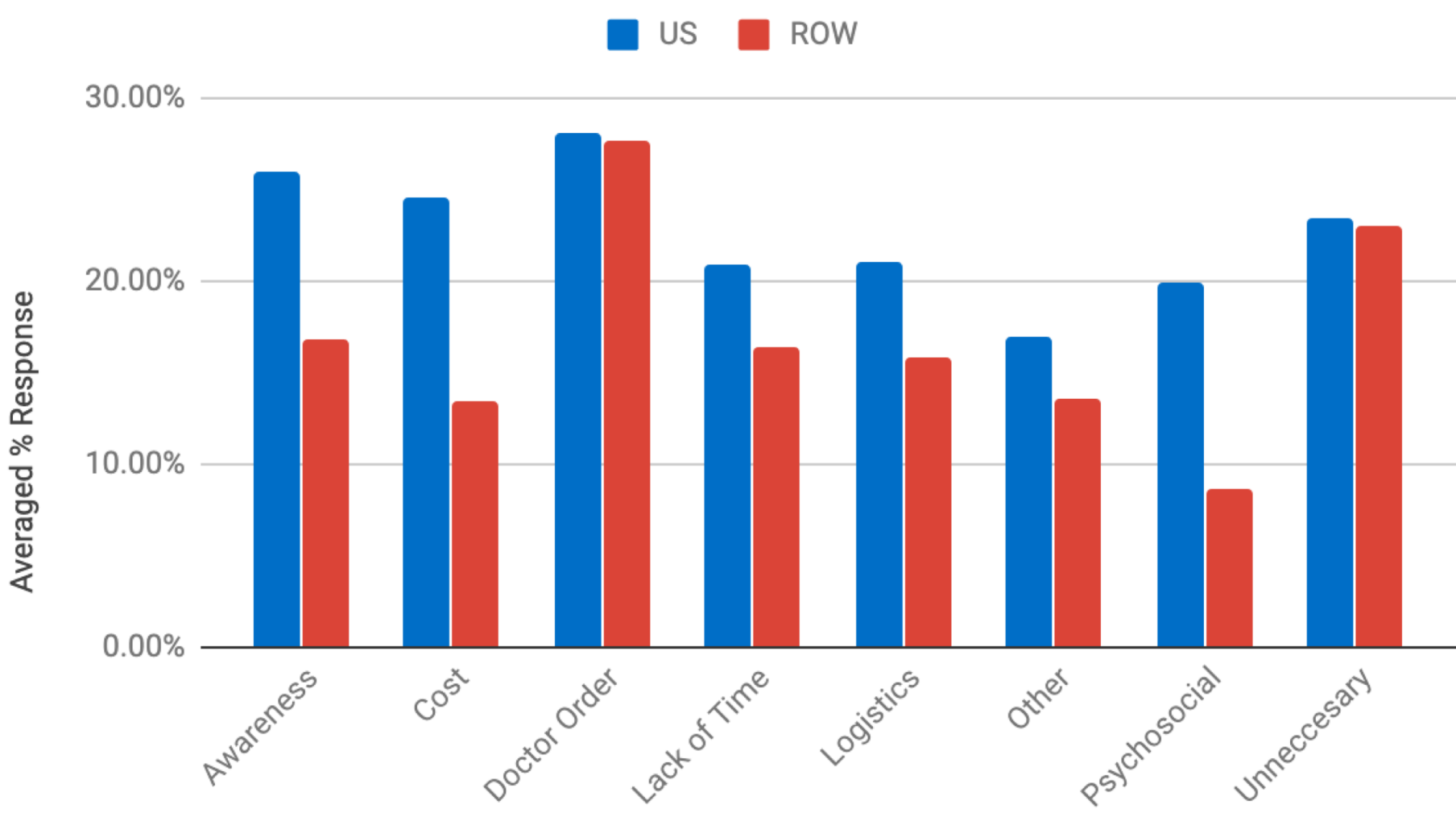
Psychosocial

- "Fear of pain from procedure"
- "Fear of cancer diagnosis"
- "Fear of tube/fear of procedure"
- "Test was uncomfortable or embarrassing"
- "Fear of abnormal findings"
- "I was afraid"

Unnecessary

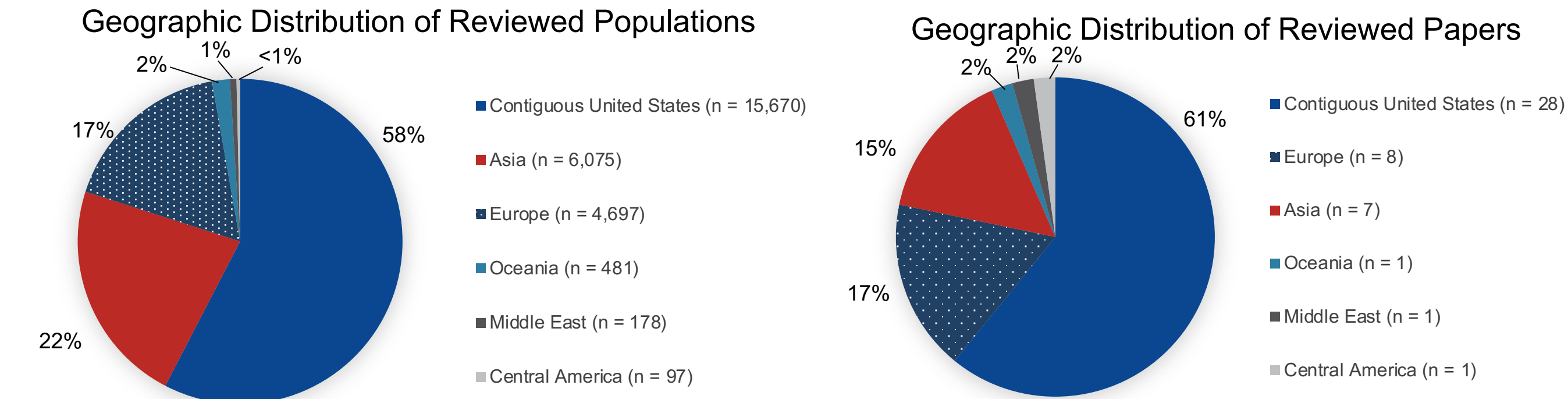
- "Didn't think it was needed"
- "No problem/no symptoms"
- "Perception of not needing the test"
- "Not necessary as I am healthy"
- "I am very low risk of colorectal cancer"
- "Haven't had any problems"
- "They saw no need because they were not having any problems"

Averaged % response per barrier category, US vs Rest of World (ROW)



Doctors' failure to order the test and patients' belief that screening is unnecessary are major global barriers to CRC screening

Geographic Distribution of Data



Conclusions

This extensive and comprehensive literature review identified that, **the most effective screening compliance intervention should be aimed at clinician education**

Health providers should be cognizant of these patient-reported barriers to CRC screening when developing interventions.

Future research should **analyze differences in compliance among populations of different socioeconomic status (SES)**, as lower SES is a commonly cited predictor of poor screening compliance.

References

Reviewed Papers:

Al-Naggar, APJPC 2015
Basch, JCH 2016
Byrd, HHCI 2019
Charlton, JRH 2014
Choi, APJCP 2015
Dimitrova, PLoS ONE 2017
Farmer, Cancer 2008

Foo, APJPH 2012
Salimzadeh, IJPM 2012
Han, EJCC 2011
Hasan, Cureus 2017
Ho, AJR 2010
Hoffman, PCD 2011
Jettolina, JGIM 2019
Jones, AJPM 2010

Klabunde, AJPM 2006
Knoll, The University of Kentucky 2017
Kroupa, WJG 2019
Lo, JMS 2013
Quick, JCH 2012
Maxwell, BMC Cancer 2010
Medina, GRP 2012

Miranda-Diaz, LIERPH 2015
Muthukrishnan, PMR 2019
Ogedegbe, JNMA 2005
Ojinnaka, JCH 2015
Patel, JCH 2012
Redmond Knight, PCD 2015
Reese, HHS Public Access 2018

Robb, BMC Public Health 2008
Rossi, BMC Public Health 2005
Sly, HEB 2013
Smith, Psycho-Oncology 2016
Stacy, JCE 2008
Strong, Cancer Nursing 2014
Talaat, AJG 2015
Tessaro, PCD 2006

Thomas, JGIM 2005
Van Dam, EJC 2013
Van Rijn, JPH 2008
Von Wagner, BMC Public Health 2018
Wee, Preventive Medicine 2012
Weyl, CJON 2015
Worthley, IMJ 2006

Yitalo, JABFM 2019
Yusoff, APJCP 2013