Author’s response to reviews

Title: Underutilization and disparities in access to EGFR testing among Medicare patients with lung cancer from 2010-2013

Authors:
Julie Lynch (julie.lynch@va.gov)
Brygida Berse (bberse@rti.org)
Merry Rabb (mrabb@rti.org)
Paul Mosquin (pmosquin@rti.org)
Rob Chew (rchew@rti.org)
Sue West (swest@rti.org)
Nicole Coomer (ncoomer@rti.org)
Daniel Becker (daniel.becker@nyumc.org)
John Kautter (jkautter@rti.org)

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Author’s response to reviews:

Dear Dr. Solera,

We would like to thank the reviewers for taking their time to review our original manuscript, make recommendations for changes, and reviewing the revised submission. We appreciate the fact that Dr. Hines (Reviewer 1) and Dr. Patierno (Reviewer 3) believed that we sufficiently addressed their initial concerns and that the manuscript should be published. We will focus our response comments by Dr. Eddens (Reviewer 2). Initially Dr. Edden recommended “Accept after minor essential revisions” and, after summarizing the objectives of the study, made the following comments:

These findings will contribute to an important evidence base for eliminating lung cancer disparities. However, the manuscript would be improved by clarity in writing and presentation.
For example, some of the description of the inclusion process -- claims volume for testing and proportion of patients tested among newly diagnosed patients - is difficult to muddle through and may be better represented as a flow chart rather than a table. I don't have a specific recommendation, but the authors may try a few different ways of representing this information and running it past someone unfamiliar with the subject matter to make sure it's easy to understand at a glance. Similarly, more succinct and well-organized results and discussion sections that follow directly the stated objectives would help readability. Finally, the paper would benefit from a compelling conclusion that drives the point home that there are disparities here that exist above and beyond what is expected due to racial differences in mutation prevalence.

When Dr. Edden reviewed the changes we made, which were based mainly on the extensive comments by Dr. Hines, Dr. Edden’s recommendation was changed to: “Major revisions required” and she suggested we reorganize the manuscript to align with the objectives and write a conclusion that is compelling and clearly written. We were confused by Dr. Edden’s change in recommendation, especially because we believe the manuscript was significantly improved based on the requested changes by the reviewers.

We agree with Dr. Edden that the conclusion in the abstract and the discussion need to be revised. We believe that the compelling conclusion was that patient-level differences in lung tumor molecular testing persisted even when we controlled for tissue availability. We changed both the abstract and discussion to reflect this.

Dr. Eddens wrote, “The abstract makes it sound like this is just an exploration of predictors of guideline-level testing in the population, which is reasonable.” This was not a study of guideline-concordance. We specifically avoided writing that this study was an analysis of “guideline-level testing.” Given the limitations of claims data, we could only analyze EGFR testing among all newly diagnosed lung cancer patients.
All researchers who analyze Medicare data struggle with limited clinical information in Medicare claims data. This has not prevented researchers and policy makers from analyzing population-level utilization of various medical interventions.

We were deliberate and responsible in describing the analysis we conducted and the conclusions that could be drawn from that analysis. We can conclusively state that, at a population-level, from 2010-2013, there was underutilization in EGFR testing and that this underutilization disproportionately impacted Blacks, Hispanics, Medicaid recipients, and patients living in specific health referral regions.

Dr. Edden asked us to answer: Why did the authors do the study? What did they truly want to learn? What did they learn and what do they want readers to understand?

We rewrote the last sentence in the first paragraph to more clearly answer Dr. Edden’s first two questions:

We studied utilization of molecular tests among Medicare patients diagnosed with lung cancer. The vast majority of lung cancer patients qualify for Medicare therefore it provides a unique opportunity for a comprehensive, population-level analysis of precision medicine testing.

We wrote the discussion section to more clearly answer what we want the readers to understand.

We thoroughly appreciate all the time the reviewers put into this manuscript. We believe that both sets of reviews have substantially improved this manuscript. We hope that you will now accept our manuscript for publication.
Sincerely,

Julie Lynch