be done before antibiotic administration. This measure may encourage providers to reflexively order cultures in all patients admitted with community-acquired pneumonia in whom antibiotic administration is anticipated, even though cultures are strongly indicated in only the sickest patients. Given rising trends in obtaining cultures in low-risk patients, we advocate for the Joint Commission on Accreditation of Healthcare Organizations and Centers for Medicaid & Medicare Services to reexamine this measure with consideration of eliminating it entirely to discourage overuse.

One limitation of our study was the omission of data from 2005 through 2006, prohibiting an evaluation of whether culture rates slowed down after revisions in recommendations. Also, there may be misclassification of culture use, but this would likely be nondifferential and bias our findings for intensive care unit status toward the null.

The appropriate use of cultures could reduce potential harms from inappropriate antibiotic use and longer hospital stays, as well as decrease the summative cost of the test itself. Further attention is warranted to the judicious use of blood cultures in the management of pneumonia.

Anil N. Makam, MD, MAS
Andrew D. Auerbach, MD, MPH
Michael A. Steinman, MD

Author Affiliations: Division of General Internal Medicine, University of Texas Southwestern Medical Center, Dallas (Makam); Division of Hospital Medicine, University of California, San Francisco (Auerbach); Division of Geriatrics, San Francisco VA Medical Center and the University of California, San Francisco (Steinman).

Corresponding Author: Anil N. Makam, MD, MAS, Division of General Internal Medicine, University of Texas Southwestern Medical Center, 5323 Harry Hines Blvd, Dallas, TX 75390-9169 (anil.makam@utsouthwestern.edu).


Author Contributions: Dr Makam had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.
Study concept and design: All authors.
Acquisition of data: Makam.
Analysis and interpretation of data: All authors.
Drafting of the manuscript: Makam, Auerbach.
Critical revision of the manuscript for important intellectual content: All authors.
Statistical analysis: Makam.
Supervision: Auerbach, Steinman.

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Representation of Women as Authors of Collaborative Cancer Clinical Trials

Team-based research in medicine is common. Simultaneously, women’s role in the medical profession has grown, including the representation of women as authors of academic publications. We studied the extent to which women lead clinical trial publications from organized collaborative groups in oncology.

Methods | We conducted a bibliometric analysis of the PubMed database from 2001 to 2011, screening 5011 citations to identify eligible English-language articles. Collaborative clinical trials had the following characteristics: (1) authorship by a formally named collaborative group (eg, Radiation Therapy Oncology Group); (2) randomized controlled trial or clinical trial designation by PubMed, verified by manual review; and (3) examination of a therapeutic intervention in human patients with cancer. We developed a search protocol combining 43 terms for the corporate author search tag (cn) and 24 cancer-related keywords and Medical Subject Heading terms. We collected information on first and corresponding author and gender, as well as study sponsorship (National Institutes of Health, non-National Institutes of Health US government sources, foreign governments, for-profit industry, miscellaneous sources such as philanthropic and nonprofit foundations, and no or unreported sponsorship). Associations between authorship and sponsorship were analyzed using y2 tests; time-based trends were analyzed using the Cochran-Armitage test.

Results | Between 2001 and 2011, among 2498 eligible articles, first (1913 [76.6%]) and corresponding (2012 [80.5%]) authors were predominantly men. Women were 16.3% to 26.4% of all first authors and 14.7% to 24.0% of all corresponding authors annually. These distributions did not change significantly over time (P for trend,.54 and .69, respectively; Figure 1).

Either industry or the US government sponsored most of the collaborative clinical trials; one or both groups sponsored...
57.3% of studies (Figure 2). Reported industry sponsorship increased from 35.8% of articles in 2001 to 63.0% in 2011 (P for trend, <.001), as did miscellaneous sponsorship (17.0% to 33.6%; P for trend, <.001). In contrast, US government sponsorship peaked between 2005 and 2008 and then declined.

Among all US government-sponsored publications, 29.0% had a woman as first author, compared with 18.7% of publications not sponsored by the US government (P < .001). Similarly, among US government-sponsored publications, 29.3% had a woman as corresponding author, compared with 15.1% of those not sponsored by the US government (P < .001). In contrast, among all industry-sponsored publications, 18.9% had a woman as first author, compared with 23.0% of publications not sponsored by industry (P = .02). Among industry-sponsored publications, 15.8% had a woman as corresponding author, compared with 20.6% of those not sponsored by industry (P = .003).

Discussion | Our results expand on a prior study,7 which found that in 2006 women represented 33% of first authors and 20% of senior authors of original cancer research in 8 major journals.

Although women were 46% of oncology trainees and 45% of biomedical research fellows-in-training in 2013, they represent only 28.4% of oncologists and 20% to 29% of academic researchers in the United States.8 Gender bias and other challenges may explain these differences.9 Addressing barriers to the academic advancement of female oncologists may facilitate equity and improve collaborative research efforts, given the value that diversity brings to team endeavors.5

Gordon H. Sun, MD, MS
Nicholas M. Moloci, BSE
Kelsey Schmidt
Mark P. MacEachern, MLIS
Reshma Jagsi, MD, DPhil

Author Affiliations: Robert Wood Johnson Foundation Clinical Scholars Program, University of Michigan, Ann Arbor (Sun, Moloci, Schmidt, Jagsi); student, University of Michigan, Ann Arbor (Schmidt); A. Alfred Taubman Health Sciences Library, University of Michigan, Ann Arbor (MacEachern); Department of Radiation Oncology, University of Michigan, Ann Arbor (Jagsi).

Corresponding Author: Reshma Jagsi, MD, DPhil, Department of Radiation Oncology, University of Michigan, 1500 E Medical Center Dr, UHBC2C490, SPC 5010, Ann Arbor, MI 48109-5010 (rjagsi@med.umich.edu).


Author Contributions: Drs Sun and Jagsi had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: Sun, Moloci, MacEachern, Jagsi. Acquisition of data: Sun, Moloci, Schmidt, MacEachern.

Analysis and interpretation of data: Sun, Moloci, Jagsi. Drafting of the manuscript: Sun, Moloci, MacEachern, Jagsi. Critical revision of the manuscript for important intellectual content: All authors.

Statistical analysis: Sun. Administrative, technical, and material support: Moloci.

Study supervision: Sun, Moloci.

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Additional Information: Dr Sun is now an employee of Partnership for Health Analytic Research, LLC, in Beverly Hills, CA, and a general otolaryngologist at the UCLA Arthur Ashe Student Health and Wellness Center in Los Angeles.

Vozoris' recently reported that menthol cigarette use was associated with increased stroke risk compared with nonmenthol cigarette use among US smokers (odds ratio, 2.25; 95% CI, 1.33-2.78). These results, however, were not consistent across all demographic groups. For example, no increased risk was observed among African American smokers, a group with a high menthol smoking prevalence. I recently reported that menthol cigarette use was associated with lower lung cancer mortality among US smokers, although I found no difference in mortality risk for other causes. This study reexamines stroke risk among US menthol smokers using national health survey data and mortality follow-up.

Methods | I used data from the 1999 through 2010 National Health and Nutrition Examination Survey (NHANES), a nationally representative health survey of the US civilian noninstitutionalized population conducted by the National Center for Health Statistics. It includes a health interview as well as a physical examination and collection of biospecimens. Approximately 22,000 NHIS participants were observed for mortality through the end of 2006 by linking their records to the National Death Index, which is maintained by the National Center for Health Statistics and contains death certificate information for all US decedents since 1979. I conducted a survival analysis of current smokers at baseline by menthol cigarette use, using a Cox proportional hazards regression model. I controlled for sex, age, race and ethnicity, educational attainment, body mass index, and the ratio of family income to the poverty threshold, use of other tobacco products, and body mass index as control variables in the analysis. Of the 7055 NHANES participants who reported that they were current smokers, 5745 had information for all regression variables, including menthol cigarette use (600 smokers did not have family income information and 294 were missing menthol information). In total, 1765 smokers were identified as menthol smokers and 3980 as nonmenthol smokers. Of these smokers, 195 reported having had a stroke. Stroke prevalence was 3.4% (95% CI, 2.9%-4.0%) among nonmenthol smokers and 3.3% (95% CI, 2.6%-4.3%) among menthol smokers. Stroke prevalence was similar among all NHANES smokers at 3.5% (95% CI, 3.0%-4.1%) for nonmenthol smokers and 3.8% (95% CI, 3.0%-4.7%) for menthol smokers. I conducted the analyses using the appropriate NHANES sample weights, taking into account the NHANES complex sample design.

I also analyzed stroke mortality risk using 1987 National Health Interview Survey (NHIS) Cancer Control Supplement data linked for mortality follow-up. The NHIS is an annual questionnaire-based health survey of the US civilian noninstitutionalized population. Approximately 22,000 NHIS participants 18 years and older completed the Cancer Control Supplement in 1987. These individuals were observed for mortality through the end of 2006 by linking their records to the National Death Index, which is maintained by the National Center for Health Statistics and contains death certificate information for all US decedents since 1979. I conducted a survival analysis of current smokers at baseline by menthol cigarette use, using a Cox proportional hazards regression model. I controlled for sex, age, race and ethnicity, educational attainment, body mass index, and the ratio of family income to the poverty threshold, use of other tobacco products, and body mass index as control variables in the analysis. Of the 4832 smokers who had information for all variables, 1356 were identified as menthol smokers and 3476 as nonmenthol smokers. Among these individuals, 1221 deaths were ascertained through linkage with the National Death Index, of which 56 were caused by stroke (International Classification of Diseases, Tenth Revision, codes 160-169). All NHANES and NHIS data used in this analysis have been released for public use by the National Center for Health Statistics, so institutional review board approval was not needed or obtained.

Results | The Table presents adjusted odds ratios for stroke for NHANES menthol smokers compared with nonmenthol smokers. No difference in risk was observed among smokers overall or among male or female smokers. Odds of stroke were lower for African American menthol smokers, but it is possible that this estimate was affected by a limited sample size and/or residual confounding. I also did not observe a difference in stroke mortality risk for menthol cigarette use among NHIS smokers (hazard ratio, 0.67; 95% CI, 0.34-1.33).

Discussion | I found no evidence in national health survey data of a higher stroke risk for US menthol smokers compared with nonmenthol smokers. I examined an expanded set of NHANES data compared with that used by Vozoris1

Table. Incidence of Stroke for Menthol Smokers Compared With Nonmenthol Smokers, 1999 Through 2010 NHANES

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Adjusted Odds Ratio (95% CI)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All smokers (N = 5745)</td>
<td>0.95 (0.63-1.44)</td>
</tr>
<tr>
<td>Males (n = 3211)</td>
<td>0.74 (0.42-1.33)</td>
</tr>
<tr>
<td>Females (n = 2534)</td>
<td>1.02 (0.61-1.72)</td>
</tr>
<tr>
<td>Non-Hispanic race/ethnicity</td>
<td></td>
</tr>
<tr>
<td>African Americans (n = 1331)</td>
<td>0.52 (0.28-0.99)</td>
</tr>
<tr>
<td>Whites (n = 2978)</td>
<td>0.87 (0.48-1.58)</td>
</tr>
<tr>
<td>Mexican Americans (n = 894)</td>
<td>1.12 (0.26-4.77)</td>
</tr>
</tbody>
</table>

Abbreviation: NHANES, National Health and Nutrition Examination Survey.
* Odds ratios were adjusted for sex, age, race and ethnicity, pack years of smoking, body mass index, and the ratio of family income to the poverty threshold.