A review of U.S. online news coverage of mammography based on a Google News search

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Introduction

- In 2009, the United States Preventive Services Task Force (USTPF) published revised guidelines recommending biannual screening mammography for women ages 50-74 of average risk.
- These recommendations conflicted with those from the ACR*, ACS*, and ACOG*.
- This controversy received much attention from the news media, potentially impacting patients’ and policy makers’ view on screening mammography.

*ACR (American College of Radiology); ACS (American Cancer Society); ACOG (American Congress of Obstetricians and Gynecologists)
Aim

- Characterize online news coverage relating to mammography.
- Explore the potential impact of the revised USTPF guidelines on such online news articles’ stance toward the screening mammography controversy.
Methods

- Google News was used to systematically search online U.S. news sites.
  - Ranks news articles by popularity and relevance
- The search was conducted over a nine-year period (2006-2015) based on the search terms “mammography” and “mammogram.”
- The top 100 search results were recorded for each year.
- Identified articles were manually reviewed.
Results

- Sources of news articles in most recent year:
  - Local news (50%)
  - National news (24%)
  - Non-imaging medical source (6%)
  - Entertainment/culture news (4%)
  - Business news (4%)
  - Peer-reviewed medical journal (1%)
  - Radiology news (1%)
Results

- Predominant themes of articles on mammography in the most recent year of search of Google News

<table>
<thead>
<tr>
<th>Theme</th>
<th>Percent of Articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>The screening mammography controversy</td>
<td>29%</td>
</tr>
<tr>
<td>Describing a new breast imaging technology</td>
<td>25%</td>
</tr>
<tr>
<td>Dense breasts issue</td>
<td>11%</td>
</tr>
<tr>
<td>Promoting public screening initiatives</td>
<td>11%</td>
</tr>
<tr>
<td>Patient experience</td>
<td>6%</td>
</tr>
<tr>
<td>Mammography market projections</td>
<td>4%</td>
</tr>
<tr>
<td>Complication from getting a mammogram</td>
<td>2%</td>
</tr>
<tr>
<td>Radiation risks</td>
<td>2%</td>
</tr>
<tr>
<td>Celebrity undergoing a mammogram</td>
<td>2%</td>
</tr>
<tr>
<td>Poor quality of given facility</td>
<td>2%</td>
</tr>
</tbody>
</table>
Results

- 35% of articles provided a patient story
- 45% mentioned a specific screening facility
- 64% mentioned radiology or a radiologist in general
- 36% directly quoted or consulted a radiologist
Results

- In the most recent year, articles’ stance toward screening mammography:
  - 59% favorable
  - 16% unfavorable
  - 25% neutral

- In first year of analysis (2006-2007):
  - 34% favorable
  - 4% unfavorable
  - 62% neutral

- From 2010-2011 to 2012-2012, there was an abrupt decrease in the fraction of neutral articles from 72% to 47%.
Results

- Stance toward screening mammography by year

![Bar chart showing stance toward screening mammography by year with different color codes for neutral/balance, unfavorable, and favorable responses.](chart_image)
Results

- Stance toward screening mammography of articles from national vs. local news outlets
Discussion

- Online news articles from numerous sources have addressed a range of topics related to mammography.

- National news sites vs local news:
  - More likely to focus on the screening controversy
  - More likely to take an unfavorable view

- After the revised guidelines, observed abrupt polarization of stances in both directions (negative and positive).
  - Overall tendency toward a favorable, rather than an unfavorable, stance
Conclusion

- As radiologists, we should:
  - Recognize the importance of such online news coverage of screening mammography, including how it may impact public perceptions and potentially guideline adherence
  - Assist in promotion of the online dissemination of reliable information on this topic.