2012 Chicago Multidisciplinary Symposium in Thoracic Oncology
September 6-8, 2012

Thursday, September 6, News Briefing
7:00 a.m. Central time

Moderated by Ramesh Rengan, MD, PhD
University of Pennsylvania
Philadelphia
• This symposium is co-sponsored by ASCO, ASTRO, IASLC and The University of Chicago.
• More than 700 attendees are expected.
• 348 abstracts will be presented.
• The embargo for all science presented lifts at 8:00 a.m. Central time today.
• Please hold all questions until the end. Online participants may submit questions to the host via the online chat tool.
How Do Social Factors Explain Outcomes in Non-small Cell Lung Cancer Among Hispanics in California?

Manali Patel, MD, MPH; Clayton Schupp, PhD; Ellen Chang, ScD; Scarlett Gomez, PhD; Heather Wakelee, MD
Background and Purpose

• Hispanics in the U.S. have a lower age-adjusted incidence and mortality rate from NSCLC compared with non-Hispanic whites despite a lower socioeconomic status. This is termed the “Hispanic paradox”

• Previous research demonstrates that nativity may explain the Hispanic paradox with foreign-born Hispanics demonstrating better survival than U.S.-born Hispanics from NSCLC

• Few studies have evaluated the influence of neighborhood factors on survival but no studies have evaluated the influence of nativity, neighborhood factors, and clinical factors on survival from NSCLC

• To evaluate the interplay of neighborhood, clinical and individual factors on survival among Hispanics in California with NSCLC
Methods

• Hispanic patients between years of 1988-2008 were identified by the California Cancer Registry
• Classification of Hispanic ethnicity was enhanced by the application of the North American Association of Central Cancer Registries Hispanic Identification Algorithm
• Cancer registry or death certificate data on place of birth was used to determine nativity for 90.3% of patients; Validated method using social security numbers imputed nativity for 9.7% of patients with unknown place of birth
• Cancer addresses at diagnosis were geocoded using a parcel-based method and linked to census-block-group level composite index of SES that incorporates 1999 and 2000 U.S. census data on education, occupation, unemployment, household income, poverty, rent and house values
• Ethnic enclave composite index was developed through principal components analysis and included 1990 and 2000 U.S. census block group data on % linguistically isolated, % linguistically isolated who speak Spanish, % speaking limited English, % Spanish speaking who spoke limited English, % of recent immigrants, % Hispanic and % foreign-born
Results

• n = 14,829 Hispanic patients with NSCLC
  – Majority were male, older than 60, and married
  – >50% presented with advanced stage
    • Foreign-born (59.1%) vs. U.S.-born (54.2%)
  – Majority did not receive treatment
  – Foreign-born compared to U.S.-born were more likely to live in the lowest SES neighborhood and highest Hispanic enclaves

• Foreign-born Hispanics had a 13% decreased risk of NSCLC mortality compared with U.S.-born Hispanics (after adjustment for age, gender, year of diagnosis, marital status and treatment)

• Adjustment for neighborhood factors, specifically SES and ethnic enclave, slightly moderated the survival benefit among foreign-born relative to U.S.-born Hispanics.
Discussion

• There is better survival among foreign-born than U.S.-born Hispanics with NSCLC despite lower income, education and access to medical care among foreign-born Hispanics.

• Enclave plays an important, perhaps protective role for foreign-born Hispanics with NSCLC.

• Enclave may serve as a proxy for social capital, and this study suggests that social factors may help to explain survival advantage among foreign-born Hispanics with NSCLC.
Patterns of Practice and Outcomes for Stage I Non-small Cell Lung Cancer (NSCLC): Analysis of SEER-17 Data 1999-2008

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Background:

- Lung cancer is among the most common cancer diagnoses and the most common cause of death from cancer.

- For stage I (the earliest stage) of lung cancer, surgery is the primary treatment.

- For patients too sick for surgery, radiation treatments offer an alternative, non-invasive, painless chance for cure.

- Recent advances in radiation technology have increased the dose we can give to the tumor and reduce the dose to the healthy surrounding lung.
Background:
Stereotactic Body Radiation Therapy (SBRT) is one way we have increased radiation dose to the tumor while sparing the healthy surrounding tissue.
Methods

- SEER-17 database identified 53,764 patients with stage I NSCLC (1999-2008)

- Patterns of care analyses and survival curves were generated from these data

- Patients from two eras were compared: 27,469 from 1999-2003 vs. 26,195 from 2004-2008
Key Findings:
Outcomes in 2004-2008 vs 1999-2003

Survival for all stage I lung cancer patients improved by 27%

Survival for stage I lung cancer patients treated with only radiation improved by 31%
Key Findings:

Fewer patients are getting radiation, more patients are getting surgery.

1 in 6 are still not getting curative treatments (either surgery or radiation).

1999-2003 (27,469 total)
- Surgery: 16,447 (60%)
- Surgery + RT: 1,016 (4%)
- RT only: 3,969 (14%)
- No treatment: 5,514 (20%)
- Unknown: 523 (2%)

2004-2008 (26,295 total)
- Surgery: 17,571 (67%)
- Surgery + RT: 754 (3%)
- RT only: 3,504 (13%)
- No treatment: 4,218 (16%)
- Unknown: 238 (1%)
Conclusions:

Survival for stage I lung cancer patients improved for almost all treatment groups and improved the most for patients treated with radiation alone.


The number of patients who do not receive a potentially curative therapy decreased, but 1 in 6 patients still did not get a curative surgery or radiation between 2004-2008.
Marital Status is an Independent Predictor of Survival for Patients Undergoing Definitive Concurrent Chemoradiation for Stage III Non-small Cell Lung Cancer (NSCLC)

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Improved Overall Survival In Married Patients Compared to Single Patients

Overall survival (%)

0 1 2 3 4 5

Years

Single (0% at 5 years)

Married (23% at 5 years)
P=0.0206
Improved Overall Survival in Married Whites Compared to Married Blacks and Single Patients

- Single - White (11% at 3 years)
- Married - White (40% at 3 years)
- Single – Black (11% at 3 years)
- Married – Black (26% at 3 years)

P=0.005
Improved Overall Survival in Married Females Compared to Married Males and Single Patients

- Single – Male (3% at 3 years)
- Married - Male (25% at 3 years)
- Single – Female (25% at 3 years)
- Married – Female (46% at 3 years)

P=0.029
Conclusions

• Marital status is an important predictor of outcomes in stage III NSCLC patients treated with definitive chemoradiation

• Exact etiology of this inferior outcome is unclear however marital status may be a surrogate for better supportive care and compliance with treatment

• If this is the case, then (1) interventions to improve social support play a vital role for single patients and (2) single males and blacks may have the most to gain
Q and A
To arrange an interview with any of the authors or for additional information, please contact Michelle Kirkwood or Nicole Napoli in the Press Room at 312-595-3188 or via email at michellek@astro.org or nicolen@astro.org