



Disparities in Lung Cancer Treatment

Triage for Appropriate Treatment Panel

Elizabeth A David MD, MAS FACS

General Thoracic Surgery

American Cancer Society

National Lung Cancer Roundtable Annual Meeting

December 11-12, 2017

UCDAVIS
HEALTH



Disclosures

- **None**

Objectives

- **Disseminate current disparities for patients with NSCLC**
- **Explain how disparities impact patients with NSCLC**
- **Inspire hope and ideas to continue optimize survival and patient-centered outcomes for patients with NSCLC**

Objectives

- **Disseminate current disparities for patients with NSCLC**
- **Explain how disparities impact patients with NSCLC**
- **Inspire hope and ideas to continue optimize survival and patient-centered outcomes for patients with NSCLC**

dis·par·i·ty

/də'sperədē/ 

noun

a great difference.

"economic **disparities between** different regions of the country"

synonyms: discrepancy, inconsistency, imbalance; [More](#)

OXFORD

JNCI J Natl Cancer Inst (2017) 109(9): djx030

doi: 10.1093/jnci/djx030

First published online March 31, 2017

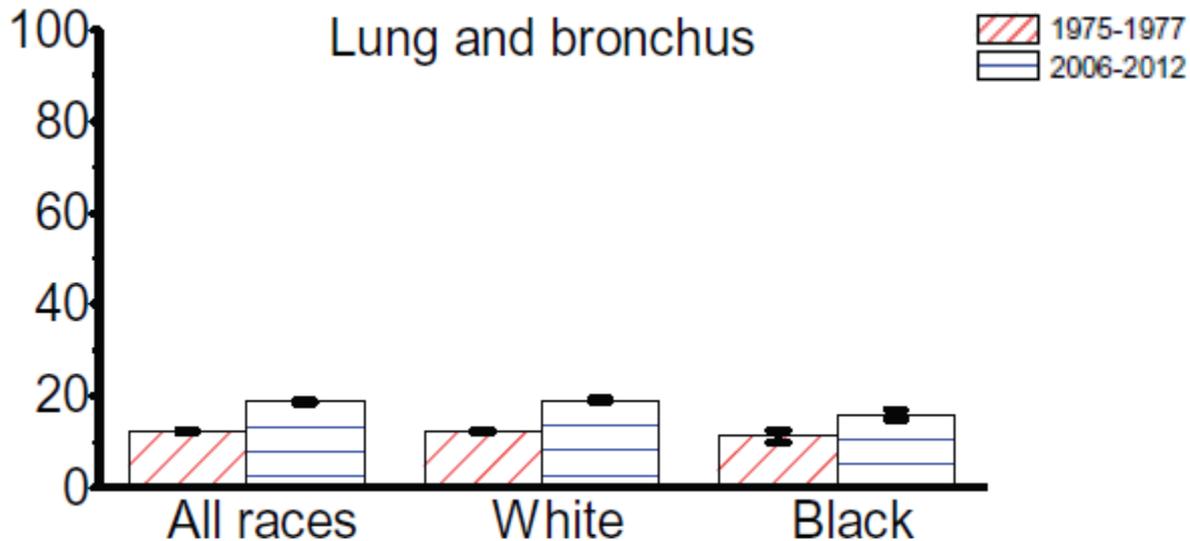
Article

ARTICLE

Annual Report to the Nation on the Status of Cancer, 1975–2014, Featuring Survival

Ahmedin Jemal, Elizabeth M. Ward, Christopher J. Johnson, Kathleen A. Cronin, Jiemin Ma, A. Blythe Ryerson, Angela Mariotto, Andrew J. Lake, Reda Wilson, Recinda L. Sherman, Robert N. Anderson, S. Jane Henley, Betsy A. Kohler, Lynne Penberthy, Eric J. Feuer, Hannah K. Weir

Survival and Race



5-year survival has improved from 12.2% to 18.7% overall

Whites 20.4%

Blacks 17.2% *

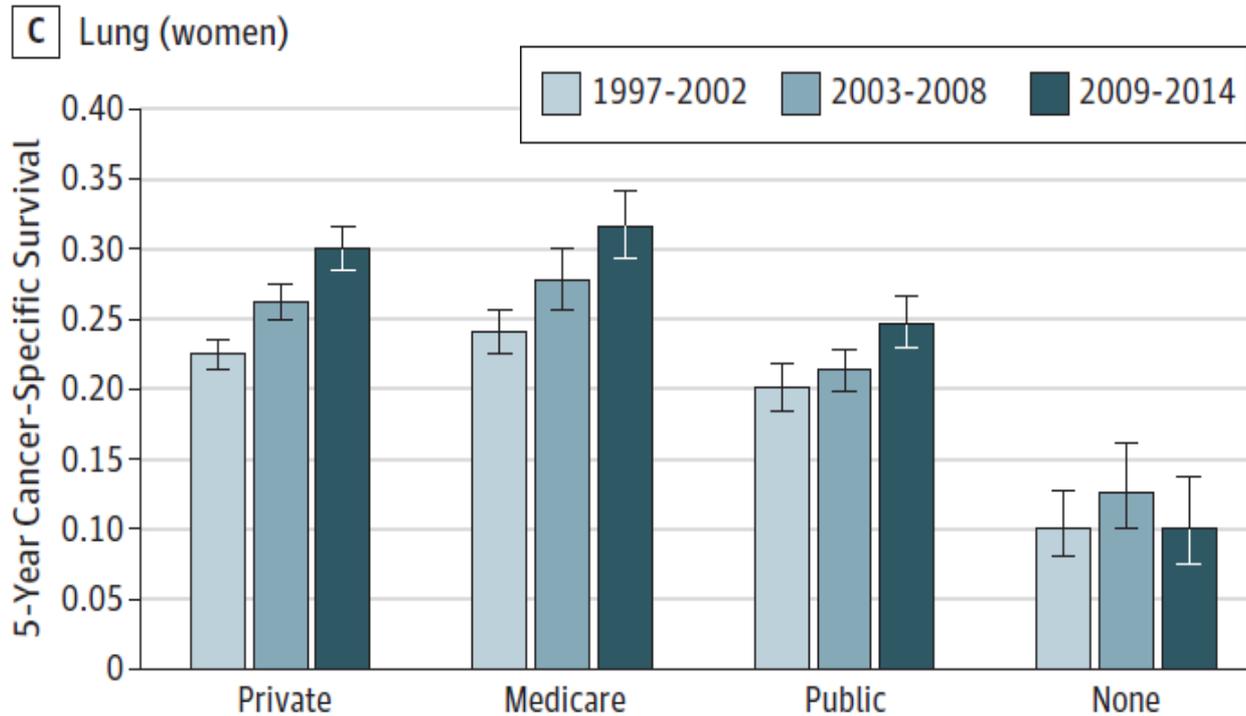
Hispanics 19.2%

Asian/Pacific Islanders 22.2%

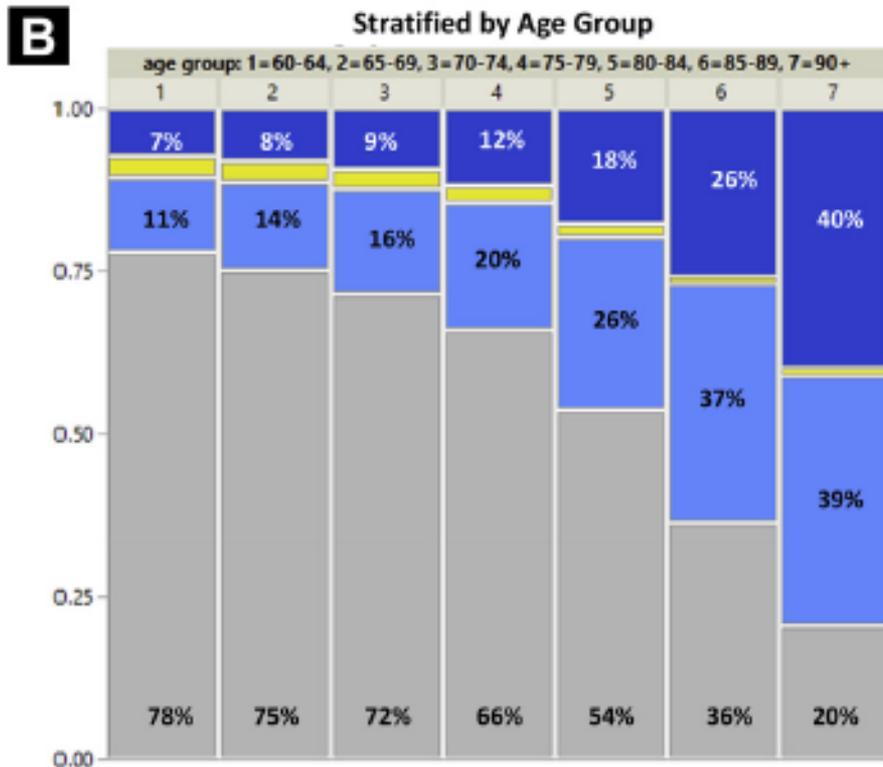
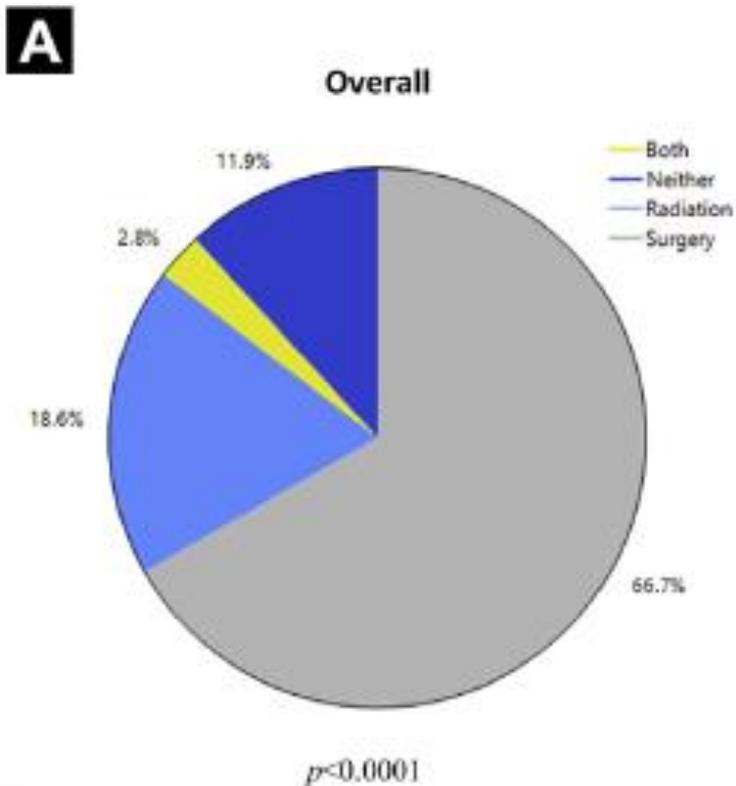
American Indian/Alaska Native 15.9% *

Jemal et al. JNCI 2017

Survival and Insurance Status

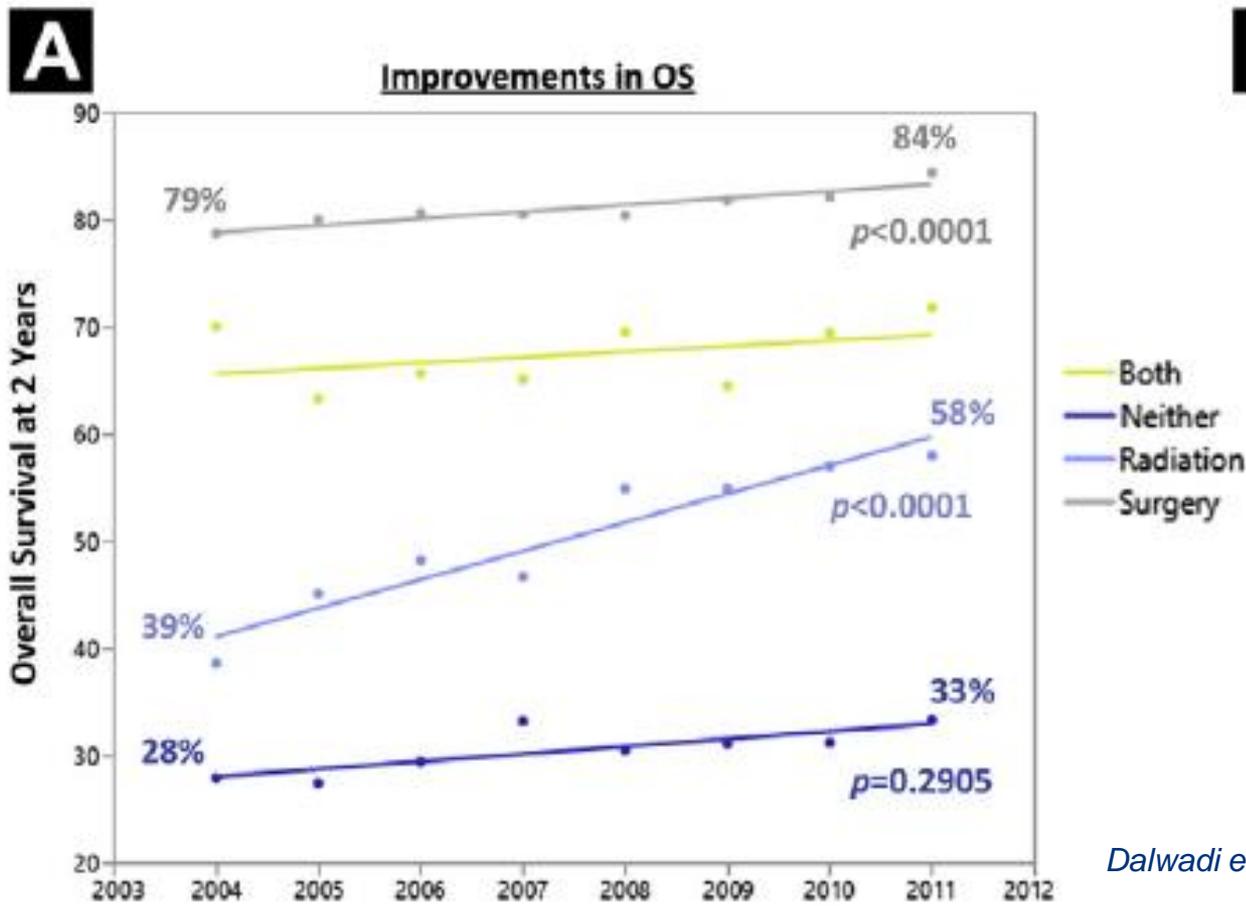


Survival and Age – Early Stage



Dalwadi et al. Clin Lung Ca 2017

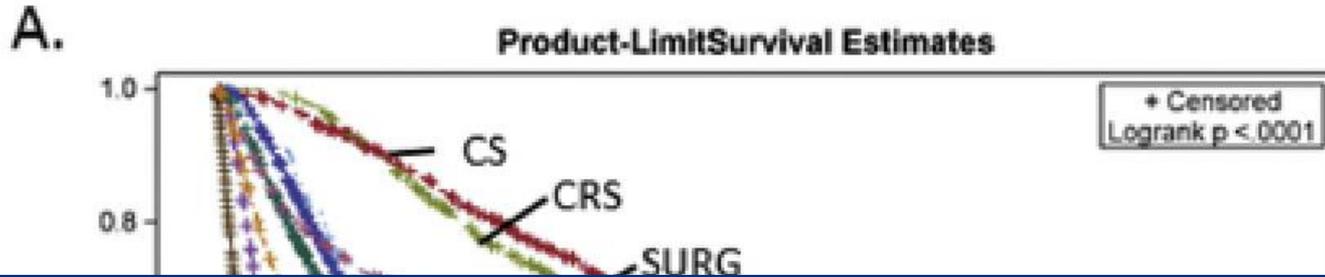
Survival and Early Stage (Age > 60)



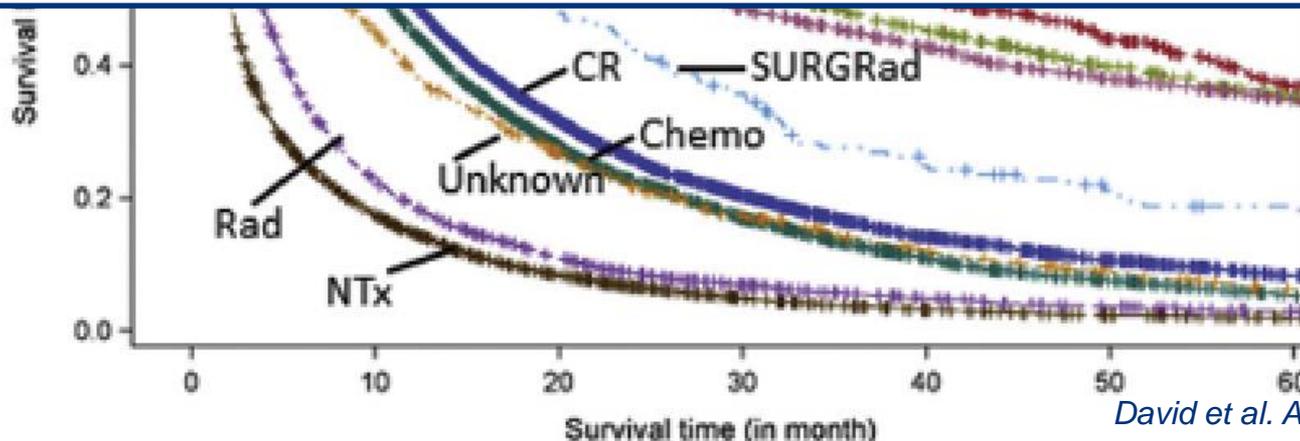
Dalwadi et al. Clin Lung Ca 2017



Survival and Advanced Stage



>75, Black, Hispanic, Middle and Lowest SES groups
No Therapeutic treatment was the most common treatment group



David et al. Ann Thor Surg 2016

UC DAVIS HEALTH

Objectives

- **Disseminate current disparities for patients with NSCLC**
- **Explain how disparities impact patients with NSCLC**
- **Inspire hope and ideas to continue optimize survival and patient-centered outcomes for patients with NSCLC**

The influence of Disparities on patients with NSCLC

- **Disparities can influence access to:**
 - Tobacco cessation programs
 - Lung cancer screening programs

 - Tertiary and quaternary treatment centers
 - Clinical trials, molecular testing
 - Multimodality treatment options

- **Perceptions and Stigma**

www.cdc.gov/tobacco/disparities

<https://www.uspreventiveservicestaskforce.org>

David et al. J Tho Onc 2017

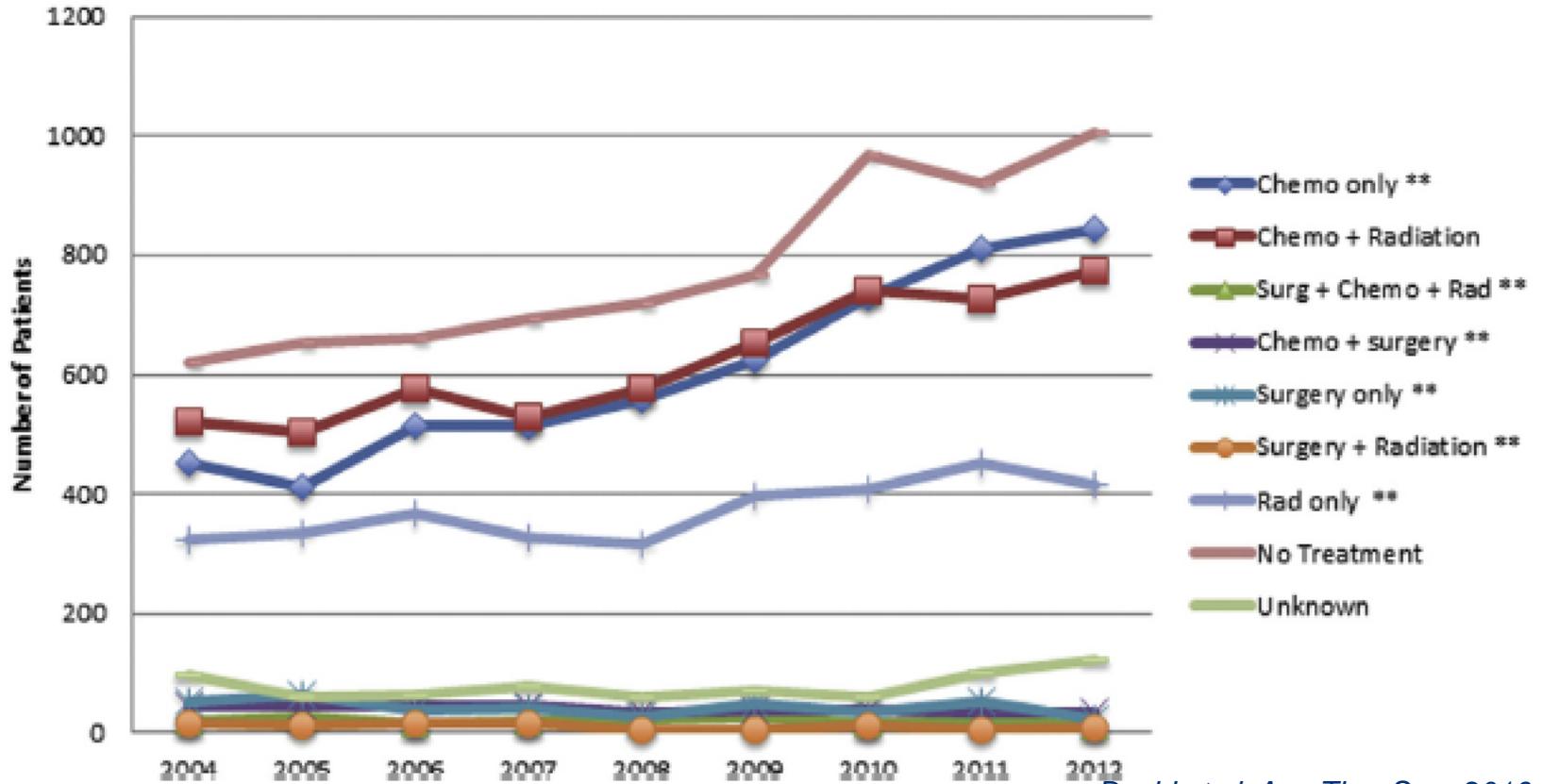
Vyfhuis et al. Lung Cancer 2017

Enewold and Thomas PLoS One 2017

Clark et al. Cancer Treat Res Commun 2016

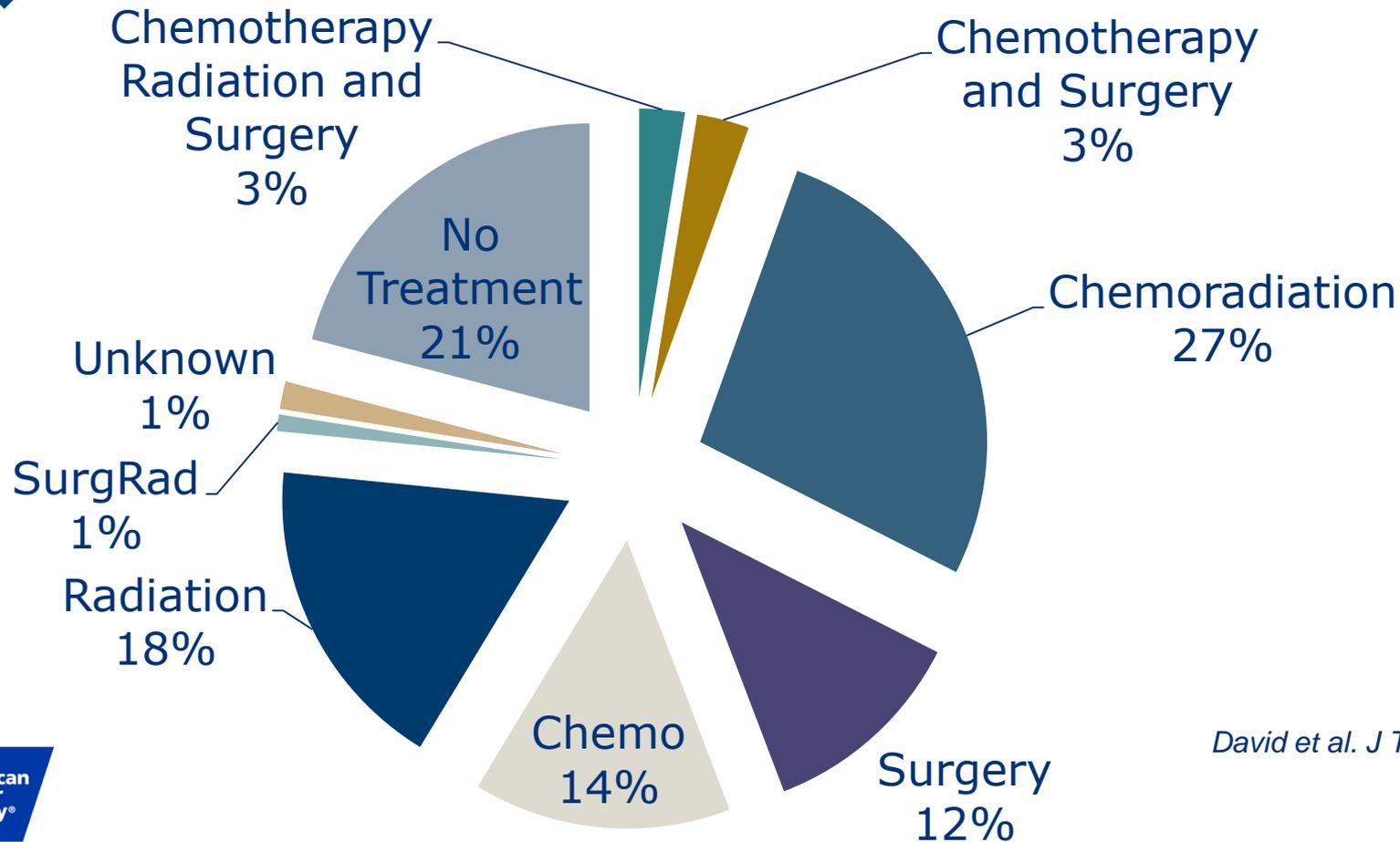
David et al. Ann Thor Surg 2016

Trends for Stage IV



David et al. Ann Thor Surg 2016

Untreated Advanced Stage NSCLC



David et al. J Tho Onc 2017

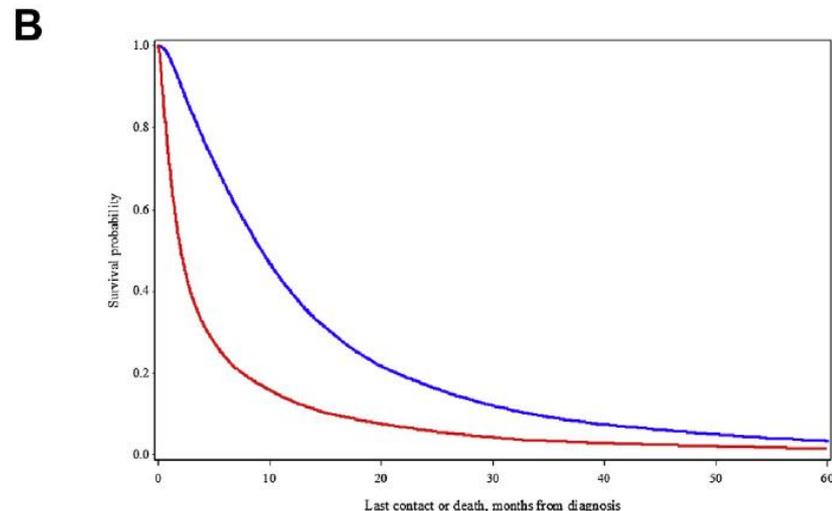
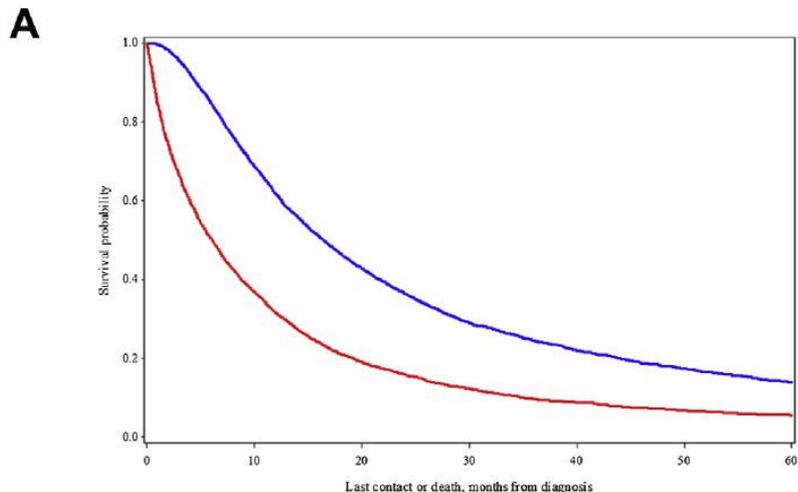
Untreated Advanced Stage NSCLC

▪ Risk Factors

- Increasing age
- Nonwhite race
- Insurance status
- Low Income
- Low Education
- Comorbidity Score
- Treatment in a community cancer program

Untreated Advanced Stage NSCLC

- Propensity matching to control for key factors impacting selection bias
- Matched patients have significantly worse survival if they receive no therapeutic treatment



— 1. ChemoRT	4100	2406	1398	877	571	363
— 2. No Treatment	2086	974	544	322	201	124

— 1: Chemotherapy alone	8545	3675	1715	856	450	238
— 2: No treatment	2809	1205	574	315	190	113

Referral and Treatment Patterns Among Patients With Stages III and IV Non-Small-Cell Lung Cancer

By Bernardo H.L. Goulart, MD, MS, Carolina M. Reyes, PhD, Catherine R. Fedorenko, MMSc, David G. Mummy, MBA, Sacha Satram-Hoang, PhD, Lisel M. Koepl, MPH, David K. Blough, PhD, and Scott D. Ramsey, MD, PhD

Fred Hutchinson Cancer Research Center; University of Washington, Seattle, WA; Genentech, San Francisco; and Q.D. Research, Granite Bay, CA

Younger age, white race, higher income, and primary physician specialty other than family practice predicted higher likelihood of referrals to medical oncologists

Seeing the three types of cancer specialists predicted higher likelihood of guideline based treatment

RESEARCH ARTICLE

Real-World Patterns of *EGFR* Testing and Treatment with Erlotinib for Non-Small Cell Lung Cancer in the United States

Lindsey Enewold^{1*}, Anish Thomas²

1 Healthcare Assessment Research Branch, Healthcare Delivery Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, Bethesda, MD, United States of America,

2 Thoracic and Gastrointestinal Oncology Branch, Center for Cancer Research, National Cancer Institute, Bethesda, MD, United States of America

EGFR testing varies significantly by age, race, insurance and comorbidity level
Patients in low income groups and smokers were less likely to receive Erlotinib

Perception and Stigma

- **Most people admit that their initial thoughts about lung cancer are negative**
 - Shame -67%
 - Stigma - 74%
 - Hopelessness - 75%
- **“Typical lung cancer patient”**
- **“Lung cancer is a self-inflicted illness”**



Objectives

- **Disseminate current disparities for patients with NSCLC**
- **Explain how disparities impact patients with NSCLC**
- **Inspire hope and ideas to continue optimize survival and patient-centered outcomes for patients with NSCLC**

What can we do?

- **Practitioner Awareness**

- Lung Cancer Facts not Myths
- Patient perspectives
- Stigma
- Make it a relatable disease

- **Tools to minimize disparities**

- Educational tools/Decision Aids
- Quantitative screening tools to guide treatment
- Patient facilitated support groups / Social Media
- Telehealth

Patients' Attitudes Regarding Lung Cancer Screening and Decision Aids

A Survey and Focus Group Study

Kristina Crothers¹, Erin K. Kross¹, Lisa M. Reisch¹, Shahida Shahrir¹, Christopher Slatore², Steven B. Zeliadt³, Matthew Triplette¹, Rafael Meza⁴, and Joann G. Elmore¹

Major Themes from participants:

1. Not aware of the purpose of lung cancer screening
2. Wanted to know about the benefits and harms
3. Believed physicians need to communicate more effectively
4. Found decision aids helpful and influential for decision-making about screening
5. Wanted the discussion to be personalized and tailored

Practitioner Tools

Fill in the information below to find out whether you are in the group where screening is recommended by the [US Preventive Services Task Force](#). The calculator will also indicate how much you stand to benefit from getting screened. This will help you better determine whether your potential benefit from screening outweighs the harms.

* INDICATES REQUIRED FIELDS

1. How old are you?*

2. What is your current smoking status?*

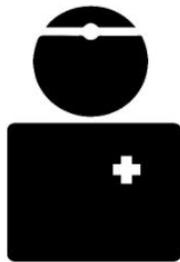
- Smoker
- Former Smoker
- Never Smoker

3. For how many years total have you smoked cigarettes?*

www.shouldiscreen.com

UC DAVIS HEALTH

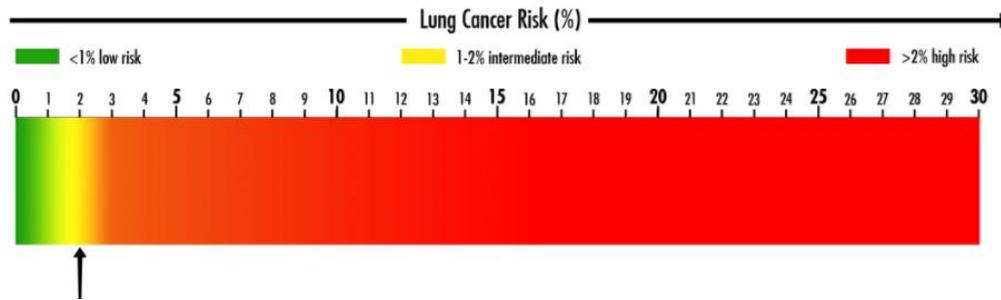
Practitioner Tools



Given your age and smoking history, you are **not eligible*** for screening according to the US Preventive Services Task Force criteria.



*However, the chance of you developing lung cancer in the next 6 years is 2.0%, which is above the threshold where we believe the benefits of screening are large enough to consider CT screening as an option. You should consider talking to your doctor about whether lung cancer screening might still be a good choice for you.



Surgical Selection Score

Histology
Tumor Size
T Status
N Status
M Status
Charlson Index
Age
Race
Facility type
Insurance
Income

- Logistic regression model that predicts selection for surgical treatment and survival
- An integer value can be calculated for each patient
- Can be used to identify patients who would benefit from referral to a surgeon

Practitioner Tools

- **Support Groups**
 - Practitioners can learn!
 - Patient facilitated
- **Social Media**
 - #LCSM twitter chat
 - LVNG With Lung Cancer on Facebook

SUPPORT

Whether you are a newly diagnosed patient, experiencing a recurrence of Lung Cancer, are stable or have received treatment and are now cancer-free (that's great!), we know that you still need support.

Regardless of where you are on your cancer journey, ALCF is with you.

LUNG CANCER LIVING ROOM *Bring Hope Home – A Patient Education and Support Series*

Every month our Lung Cancer Living Room – Bring Hope Home – A Patient Education and Support Series group sessions BRING HOPE HOME to patients and their families. Through presentations by Lung Cancer specialists, physicians and researchers, this unrestricted forum covers all topics: early detection, treatment options, molecular and genetic testing, clinical trials, drug discoveries, personalized medicine, nutrition, surgical equipment and procedures, up-to-date news about advancements and more.

We share our personal stories, get advice and support from others, critical information from caring doctors and access to researchers who, like us, are fighting Lung Cancer 24/7.

Whether you join us in ALCF's Lung Cancer Living Room – Bring Hope Home – A Patient Education and Support Series or attend [remotely through the livestream](#) on your computer, you will be informed about Living with Lung Cancer.



Practitioner Tools

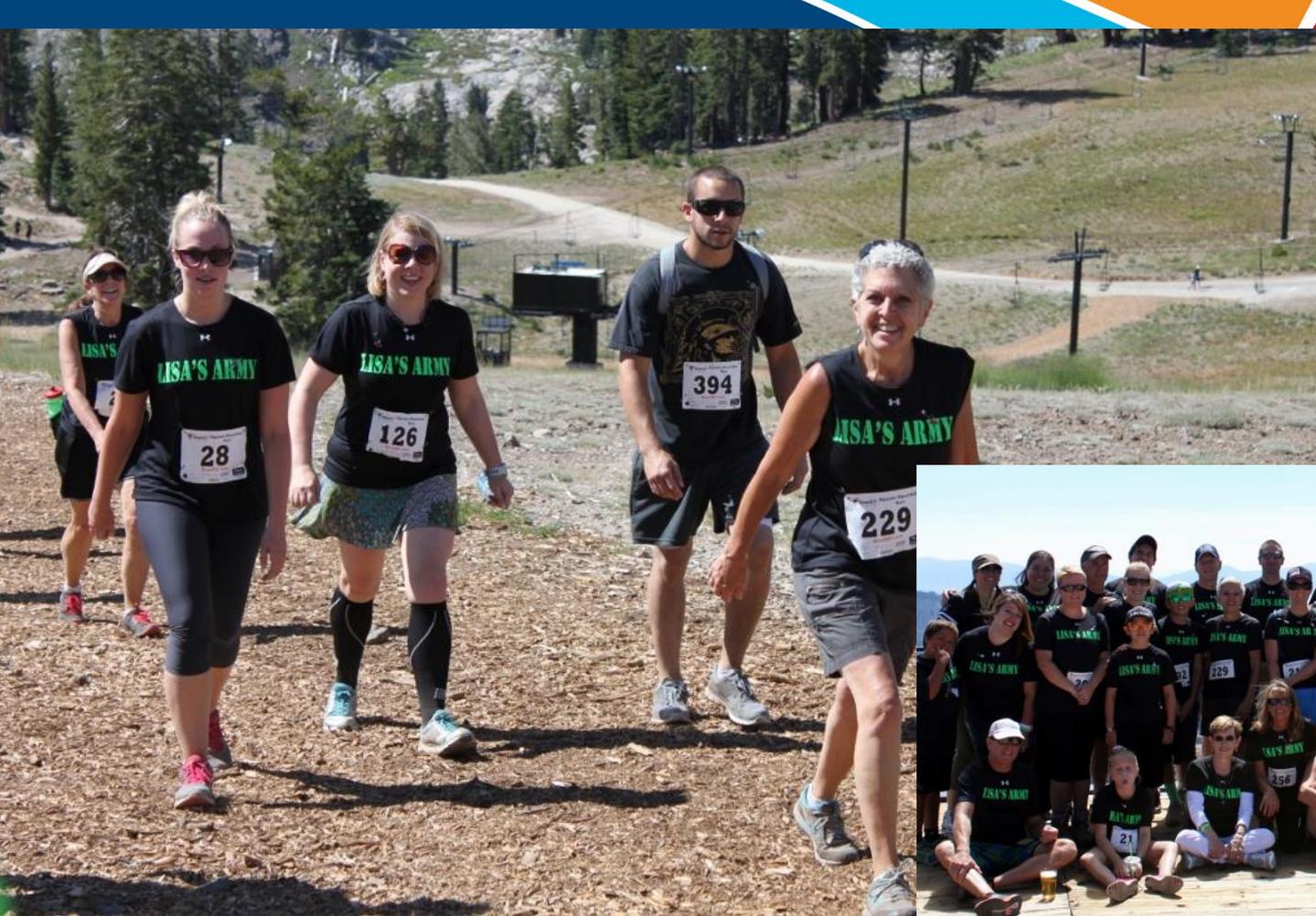


- **Participate**
- **Educate**
- **Make lung cancer a topic of conversation, not taboo**
- **Remind patients that anyone with lungs can develop lung cancer**

Telehealth

- **A helpful tool to reduce disparities**
- **Improves access to clinical trials and multidisciplinary care**
- **Rural populations**
- **Educational
webinars
case conferences**





Conclusions

- Lung cancer survival remains low, but it is improving
- Treatments are becoming easier for patients to tolerate
- Practitioners need to be aware of lung cancer disparities and educate patients
- Decisions to forgo therapeutic intent treatments should be made only after referral to specialty providers
- The “face of lung cancer” should be personal and relatable
- Encourage patients to talk about lung cancer to stop the stigma

Thank you

