Lung Cancer Survivorship and Tobacco Treatment

Jamie L. Studts, PhD

Professor
Department of Behavioral Science
University of Kentucky College of Medicine

Assistant Director
Cancer Prevention and Control
Lucille P. Markey Cancer Center


Figure 1: County Lung Mortality From Head, Branches, and Lung Cancer

Lung Cancer incidence in Kentucky

Age-Adjusted Invasive Cancer Incidence Rates in Kentucky Lung and Bronchus, 2010 - 2014

Data as of October 19, 2017 Table created on November 13, 2018
Kentucky Earle Registry
**Cancer Survivorship Trends in US**

![Graph showing cancer survivorship trends](image)


**Cancer Survivorship in the US (by site)**

![Graph showing cancer survivorship by site](image)


There have been exciting and optimism-inducing innovations in lung cancer care.

- Minimally Invasive Surgical Procedures (VATS)
- Stereotactic Body Radiation Therapy (SBRT)
- Targeted Therapies & Immunotherapies
- Survivorship and Palliative Care Innovations (Temel Study)
- Targeted Lung Cancer Screening (NLST)
- Additive Tobacco Treatment Strategies
The Commonwealth’s Cancer

Objectives

1) Describe the lung cancer survivorship burden within the region.

2) Discuss and gain an appreciation for innovative ongoing research in lung cancer survivorship.

3) Explain the role of evidence-based tobacco treatment in lung cancer survivorship care.

Lung Cancer Survivorship

How would we describe the experience of an individual diagnosed with lung cancer?

How would we like to describe the experience of an individual diagnosed with lung cancer?
Individuals diagnosed with lung cancer commonly experience substantial psychosocial burden.

The physical symptom burden of lung cancer is similarly substantial due to several disease and treatment factors.

Social support holds a vital, but complex role in lung cancer survivors.

**Social Support**
- Social support was associated with multiple quality of life components
- Social support from clinicians was associated with physical and emotional QoL
- Social support from family/friends was associated with emotional QoL

**Social Constraints**
- Individuals diagnosed with lung cancer and their spouses reported a wide variety of social constraints, including denial, avoidance, and conflict that can hinder open spousal communication.
- Specifically, patients and spouses reported trouble discussing continued tobacco use, cancer-related symptoms, prognosis, and the emotional effects of lung cancer on the spouse.
Individuals diagnosed with lung cancer face substantial stigma and bias.

- **Perceived Stigma**
  - Recognition of negative appraisal and devaluation from others

- **Enacted Stigma (Bias)**
  - Overt acts of discrimination from others

- **Internalized Stigma (Self-Blame)**
  - Belief that negative attributions are true and deserved

- **Constrained Disclosure**
  - Reduced willingness to discuss diagnosis, restricted support option


Individuals diagnosed with lung cancer demonstrate a range of risky behaviors.

- Systematic review of studies addressing tobacco use following diagnosis of lung or head/neck cancer.
- Approximately 1/3 of all individuals with lung or head/neck cancer continue to use tobacco.
- Over half of individuals who use tobacco at baseline continue to use.


Rural-residing lung cancer survivors experience additional challenges.

- Rural LuCa survivors report poorer mental health relative to Urban LuCa survivors.
- Some evidence suggests poorer access and less use of mental health services and cancer support groups among rural survivors.

Andrykowski et al., 2014.
(Andrykowski & Burris, 2010)
Lung Cancer Survivors are less likely to be engaged and actively involved in care.

- Few individuals diagnosed with early stage lung cancer experience shared decision making.
- Noteworthy discordance in perceptions of decision making between individuals diagnosed with lung cancer and clinicians.
- Over two-thirds of individuals receiving chemotherapy for metastatic lung cancer did not understand that their treatment would not being delivered with curative intent.
- Efforts to encourage engagement and activation have been recently initiated but have yet to increase patient activation.

In summary, how should we think about lung cancer survivors in Kentucky?

- Lung Cancer Survivors are likely to experience:
  1. ...clinically-relevant levels of distress
  2. ...prominent symptom burden
  3. ...multiple health-compromising behaviors
  4. ...substantial stigma as well as self-blame
  5. ...lower levels of social support (complicated)
  6. ...substantially less engagement and motivation for care
  7. ...barriers to access care, survivorship care, in particular

Precision Medicine
an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person.
How might precision medicine/oncology apply to patient-centered care, including survivorship care?

**Patient Preferences**

- Values
- Opinion
- Beliefs

**Precision Survivorship Care**

The Kentucky LEADS Collaborative Lung Cancer Survivorship Care Program is a Precision Medicine approach to Survivorship.

- By design, the intervention targets the most prevalent and distress symptoms and challenges associated with a lung cancer diagnosis.
- By integrating patient preferences, the intervention is tailored to the unique needs of the survivor, the preferred delivery method, and the desired level of involvement of the social support network.

**The Kentucky LEADS Collaborative Lung Cancer Survivorship Care Program**
Survivorship Care (SC)

Patient and Caregiver Intervention

- Built and implementing a novel psychosocial survivorship care intervention for individuals diagnosed with lung cancer and their caregivers (10 sites, 300 participants)
- Four key domains
  - Lung cancer info
  - Symptom coping
  - Psychosocial concerns
  - Caregiver support

Patient Modules (Session Topics)

1. Lung Cancer Basics
2. Navigating the Healthcare System
3. Coping with Pain/Addiction Concerns
4. Coping with Fatigue
5. Coping with Sleep Problems
6. Coping with Shortness of Breath
7. Coping with Distress
8. Social Support
9. Values and Decision Making
10. Healthy Living
11. Tobacco Use
12. Caregiver Concerns and Self-Care

Survivorship Care (SC) Specialist Training Program

- A sustainable companion training program to support KY LEADS SC Specialists in their work with the program.
- Training Program
  - Online CE Program
  - Training Manual
  - Survivor/Caregiver Workbook
SC Specialist Treatment Manual & Survivor Workbook

Tobacco Treatment following a Lung Cancer Diagnosis

Callously talking about tobacco can contribute to stigma

Lop-sided and brief discussions can harm relationships

Empathic consultations can improve relationships and health outcomes

Evidence-based interventions are available and improving

CAUTION
Benefits of Tobacco Cessation following a Cancer Diagnosis

- Reduced symptom burden
- Reduced chance of 2nd cancer
- Increased treatment efficacy
- Reduced mortality
- Improved quality of life
- Serve as role model

Treating Tobacco Use & Dependence: The 5 A's

1. Ask about tobacco use
2. Advise to quit
3. Assess willingness to quit
4. Assist in quit attempt
5. Arrange follow-up

ASCO Tobacco Cessation Guidelines

1) Talking to Patients about Tobacco Use
2) Motivating Patients to Stop Using Tobacco
3) Treating Nicotine Dependence in Patients with Cancer
4) Incorporating Tobacco Dependence Treatment into Your Practice
National Comprehensive Cancer Network
Smoking Cessation Guidelines

General Principle
• “There are health benefits to smoking cessation even after a cancer diagnosis, regardless of stage or prognosis…”

Clinical Recommendations
1) Combining pharmacologic therapy and behavior therapy is the most effective approach.
2) Smoking status should be documented in the health record.
3) Smoking relapse and brief slips are common.
4) Smoking cessation should be offered as part of oncology treatment, and continued throughout the entire care continuum.

Tobacco Use Treatment (TUT) Services at NCI-Designated Cancer Centers

• Suboptimal implementation of evidence-based tobacco use treatment in NCI-designated centers.
• Recommend establishing standards and funding to support TUT in oncology.
• Needs include stable funding, trained personnel (CTTSs), and space.

Markey CARES Tobacco Program

| Markey  |
| Cancer  |
| Assessment, |
| Referral, |
| Engagement, and |
| Support |
| Tobacco Program |

(Stateler, Ripley-Willett, Patsakham & Pathman (2013). Tobacco use treatment at the U.S. National Cancer Institute-Designated Cancer Centers. Nicotine & Tobacco Research, 15, 52-58.)
Penn Tobacco Cessation Trial
Individual Cognitive-Behavioral Therapy

- Comparison of CBT with GHE (general health education)
  - 1 individual session & 2 telephone sessions
- 109 individuals with cancer (Lung & H&N)
- All received nicotine replacement therapy
- Outcome: 30-day point prevalence
  - No Difference @ 1 month: CBT 45% vs. GHE 47%
  - No Difference @ 3 months: CBT 43% vs. GHE 39%
  - Both are above standard estimates of cessation

(Schnoll et al., 2005)

The Dynamics of Smoking Cessation After Cancer Diagnosis: A Naturalistic Study
“CATS: Cancer Adjustment and Tobacco Study”

Overarching goal is to unpack the “black box” of cancer diagnosis as a teachable moment for smoking cessation
- Population: Head/neck and cervical cancer patients who are current smokers at time of cancer diagnosis
- Approach: Intensive longitudinal study with technology-facilitated data collection
- Innovation: remote, daily assessment of behavior change processes

Specific Aims
1) Describe key events in the process of smoking cessation, including quit attempts, lapses, and relapses
2) Uncover cognitive and affective variables that promote or undermine the process of smoking cessation

Cancer Adjustment and Tobacco Study (CATS)
Funding source: K07 CA181351 Dr. Jessica Burris (PI)

The Dynamics of Smoking Cessation After Cancer Diagnosis: A Naturalistic Study
Cancer Adjustment and Tobacco Study (CATS)
Optimization of Smoking Cessation Strategies in Community Cancer Programs for Newly Diagnosed Lung and Head and Neck Cancer Patients

**Kentucky Cancer Survivors are Unique**
- More individuals continue to smoke/use tobacco following diagnosis.
- The culture of tobacco creates additional sociocultural barriers to cessation.
- Limited access to intensive cessation resources.

**Study Aims**
- To identify an efficacious, implementable cessation strategy for lung and head and neck cancer patients undergoing cancer therapy in Kentucky cancer centers.
- To assess the feasibility of routinely implementing an array of smoking cessation strategies for this population.
- To deliver high quality smoking cessation to all subjects.

Funding source: KY Lung Cancer Research Foundation Drs. Joe Valentino & Jamie L. Studts (PIs)

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Optimization of Smoking Cessation Strategies in Community Cancer Programs for Newly Diagnosed Lung and Head and Neck Cancer Patients

**Study Schema**

- Enrolled over 70 participants across Kentucky.

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Smoking Cessation Treatment Delivery to Cancer Survivors with Low Social Resources

- **Overarching goal** is to facilitate cancer survivors’ use of free and low-cost resources that could address key social challenges that might otherwise undermine quit success.

- **Specific Aims**
  1) Evaluate feasibility and acceptability of a new approach to smoking cessation treatment in cervical cancer survivors with low social resources.
  2) Assess treatment efficacy for key events in the process of smoking cessation.

Funding source: KY Lung Cancer Research Foundation Dr. Jessica Burris (PI)
Summary and Conclusions

- Individuals diagnosed with lung cancer are likely to experience substantial symptom burden, but are less likely to seek supportive care.
- Supportive care options that are specifically relevant to lung cancer survivors are emerging.
- The burden of tobacco following diagnosis of lung cancer can exacerbate symptoms and compromise outcomes of treatment.
- It is vitally important to intervene and assist with evidence-based tobacco treatment efforts among lung cancer survivors.
- New research is contributing to efforts to improve our approaches to tobacco treatment among cancer survivors.
- Vigilance and a liberal distribution of empathy, compassion, and support are vital to improving all lung cancer outcomes.