







EDUCATION · AWARENESS DETECTION · SURVIVORSHIP



A Cancer Center Designated by the National Cancer Institute



Cancer in Kentucky Working Together to Make a Difference

260CT2022

Testimony – Interim Joint Committee on Health, Welfare and Family

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THE CANCER CAPITAL OF AMERICA

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Tim Mullett

27SEP2019

Eastern Kentucky is poor, remote, and inadequately serviced, and those factors have led to alarming rates of cancer in the area.

INCOMPANYABLE R. L. R. L. P.

https://theoutline.com/post/7457/

Burden of Cancer in Kentucky

CANCER TYPES	RISK FACTORS	HEALTH EQUITY
Kentucky is a top 5 state in incidence or mortality	Kentucky-focused exposures and other risk factors	Disparities in cancer burden
Lung	Tobacco	Geographic disparities
Colorectal	Obesity	Racial / ethnic disparities
Head & Neck	Environmental exposures	Access to screening
Cervical	Viral infections (HPV, HCV)	Poverty
Melanoma		



A Common Message to Tell the Story

Pamela Hull, PhD Director, Community Impact Office Markey Cancer Center



www.kycancerneeds.org



Top 10 Cancer Incidence in KY

Age-Adjusted Incidence



Source: 2021 Kentucky Cancer Needs Assessment · Data: KCR, 2014-2018



Top 10 Cancer Mortality in KY

Age-Adjusted Mortality



Source: 2021 Kentucky Cancer Needs Assessment • Data: KCR, 2014-2018





Source: 2021 Kentucky Cancer Needs Assessment • Data: ACS, 5-Year, 2015-2019; ARC, 2021



The New York Times

Cancer Death Rate in U.S. Sees Sharpest One-Year Drop

Breakthrough treatments for lung cancer and melanoma have driven down cancer mortality overall — and from 2016 to 2017 spurred the largest-ever decline.



Cancer Mortality is Decreasing Science News

from research organizations

Lung Cancer as a Driving Force Cancer mortality continues steady decline, driven by progress against lung cancer

Drop of 2.2 percent from 2016 to 2017 is largest ever reported

Date: January 8, 2020

Source: American Cancer Society

Summary: The cancer death rate declined by 29 percent from 1991 to 2017, including a 2.2 percent drop from 2016 to 2017, the largest single-year drop in cancer mortality ever reported, according to the American Cancer Society's annual report on cancer rates and trends.

- Lung cancer death rates declined 48% among men and 23% among women.
- From 2011 to 2015, the rates of new lung cancer cases dropped by 3% per year in men and 1.5% per year in women.

Strongest Data that Lung Cancer Screening Works

- National Lung Screening Trial (US 2011)
 - 54,000 participants
 - 20% reduction in mortality
- NELSON Trial (Netherlands-Belgium 2019)
 - 15,500 participants
 - 10-year follow-up
- MILD Trail (Italy 2019)
 - 40% reduction in mortality
 - Nearly 60% mortality reduction at 10 years

What makes it work in what settings? Community? Academic? Rural? Health System?

Network





Figure 1. Lung-Cancer Incidence and Lung-Cancer Mortality among Male Participants.

Nelson Data

Lung Cancer Screening

- Approved in 2015
- Primary Care Providers identify patients
 - National average was approximately 6% of eligible patients....prior to COVID
 - Must identify patients 50-85 years old
 - 20 Pack-Year Tobacco Exposure
- Facilities that perform the technical aspects of scan
- Retention is a challenge
 - Patients must return for a scan, EVERY YEAR
 - National average is less than 30%
- New standard of care
 - Fragile
 - Most impacted by impact of pandemic, slow to recover

How can we increase impact of Kentucky LEADS in Kentucky and Beyond?

- Kentucky Cancer Consortium Lung Cancer Network
 - Continued collaboration
 - Statewide reach (Paducah to Pikeville)
- Kentucky Healthcare Collaborative
 - 10 healthcare systems
 - 70 facilities across Kentucky
- State Law Impacting Quality of Lung Cancer Screening
 - House Bill 219
 - Kentucky LEADS Influence
- National Lung Cancer Roundtable
 - One of the American Cancer Society efforts
 - Kentucky LEADS faculty fill influential leadership roles









National Lung Cancer Screening Uptake Landscape





(Fedewa et al., 2021)

Reduction in Late Stage Lung Cancer Diagnoses in Kentucky

- Stable at ~81% from 2009 through 2014
- Nearly 10% decline from 2014 to 2018!!





Cancer Care in 1920s

- Radical Mastectomy for most breast cancers
- X-ray therapy emerging
- Medical treatment was developing
 - Hormonal therapy
 - Early exploration of immune therapy
- American College of Surgeons
 - Recognized the need to focus on this increasingly complex area of medicine
 - Committee on the Treatment of Malignant Diseases



Approximately 1500 CoC-accredited Cancer Programs

- 26% of U.S. Hospitals
- 72% of all cancer cases in the U.S.



100 Years of Commission on Cancer

Founding Principle

"...Reduce the suffering and mortality from cancer by an organized **application of the knowledge that is already available**..." 1931 ACS Bulletin

Current Principle

Driving knowledge into practice remains as **relevant today** as it was in 1931



Cancer is a Genetic Disease

- Caused by changes in genes that control the way cells grow and multiply
- Genes are sections of DNA that carry instructions to cells
- Genetic changes (mutations) are being discovered frequently.



Cancer-related genetic changes can occur because:

- random mistakes in our DNA happen as our cells multiply
- our DNA is altered by <u>carcinogens</u> in our environment, such as chemicals in tobacco smoke, UV rays from the sun, and the <u>human</u> <u>papillomavirus</u> (HPV)
- they were <u>inherited</u> from one of our parents
- •

8 10 What Causes Genetic Changes?



Biomarker-Driven Treatment for Lung Cancer At-A-Glance









FDA-Approved Genomic Biomarkers for directing targeted therapies for Non-Squamous NSCLC PD-L1 TPS >50% Directs 2 Immunotherapy-Only first line treatment options Numerous biomarker-driven drugs are presently in clinical trials for NSCLC and small cell lung cancer (SCLC)

5 Organizations with guidelines for testing for comprehensive biomarker testing for NSCLC



The Accelerated Progression: 2012 to 2020



HealthCare MARKEY COredit: Ray U. Osarogiagbon, MBBS, FACP, Baptist Memorial Healthcare Corporation

Current NSCLC Lung Cancer Biomarker Guidelines

NCCN

The National Comprehensive Cancer Network[®] NCCN has released updated evidence-based guidelines on comprehensive biomarkers in lung cancer

NCCN Nation

National Comprehensive Cancer Network®

CAP, IASLC, & AMP

Evidence-based consensus guidelines on biomarker testing in NSCLC from **the College of American Pathologists (CAP)**, **International Association of Lung Cancer (IASLC)**, and the **Association for Molecular Pathologists (AMP)** recommend that all late-stage NSCLC patients with advanced stage lung adenocarcinoma should receive biomarker testing for three mutations (EGFR, ALK, and ROS1)¹ in 2018

ASCO

The American Society of Clinical Oncology (ASCO) released an update in February 2021 to their 2017 guideline on systemic therapy for patients with stage IV NSCLC with driver alterations





HealthCare Income No Segue PL Aisner DL, et al. Updated Molecular Testing Guideline for the Selection of Lung Cancer Patients for Treatment With Targeted Tyrosine Kinase Inhibitors: Guideline From the College of American Pathologists, the International Association for the Study of Lung Cancer, and the Association for Molecular Pathology. J Mol Diagn. 2018;20(2):129-159. doi:10.1016/j.jmoldx.2017.11.004

Optimizing Lung Cancer Biomarkers in Practice,

requires collaborative effort and frequent communication,

between the proceduralist, the pathologist,

the treating oncologist, the nurse navigator,

and others on the **multi-disciplinary care team**



Policy considerations for how we cover costs and decrease barriers will be critical



"Access to High Quality Biomarker Testing for All Eligible Patients with Cancer: No Patient Will Be Left Behind"





A Time of Change New technology Promising Outcomes

A time for Hope

THANK YOU



