Welcome to the IPLAN Web-Conference

Lung Cancer: An Overview of the Disease and Prevention

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Presenters

- Beth Phelps, Southern Illinois University Cancer Institute
- Julie Doetsch, Illinois Department of Public Health
- Lynda Preckwinkle, American Lung Association of
- Babs Frederking, Washington County Health Department
- Angela Tin, American Lung Association of Illinois
- Barbara Sorgatz, Illinois Department of Human Services











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Lung Cancer

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- Website: http://www.siumed.edu /cancer/clinicspages/lu ngclinic.html



Lung Cancer: Overview

"Lung cancer is the leading cause of cancer death in both men and women, and accounted for approximately 27% of all cancer deaths in Illinois from 1999-2003. Alarmingly, 87% of lung cancer deaths could be prevented by eliminating tobacco abuse."

(American Cancer Society Illinois Cancer Facts & Figures, 2006)

Lung Cancer: Incidence

- New lung cancer diagnosis, Illinois 2006
 - o Male 5,030
 - o Female 4,050
- Estimated Deaths from lung cancer, Illinois
 - o Male 3,990
 - o Female 3,090
- More deaths from lung cancer than prostate, breast and colorectal cancers combined

(American Cancer Society Illinois Cancer Facts & Figures, 2006

Lung Cancer: Women

- Account for 12% of all new cases
- More deaths from lung cancer than breast, ovarian, and uterine cancers combined.
- Women are more susceptible to tobacco effects. 1.5 times more likely to develop lung cancer than men with similar smoking patterns.

Jemal A, Thomas A, Murray T, Thun M. (2002). American Cancer Society Facts & Figures (2004).

Lung Cancer: What is it?

- Cell mutation causes uncontrollable growth and replication
- These rapidly growing cells begin to invade adjacent tissues
- Microscopic cells travel through the lymph system to other areas of lung and body. (Metastatic Disease)

(Site-Specific Cancer Series: Lung Cancer, 2004)

Lymphatic System



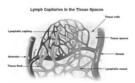
Lymphoid Organs

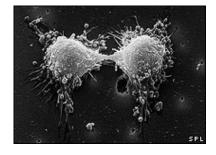
Central to the body's defense

Tonsils

Spleen

Thymus eland





Lung Cancer: Causes



- Smoking
 - Leading cause of lung cancer
 - 87% of lung cancers related to smoking
 - Risk is related to the amount of exposure

Lung Cancer: Causes

- Radiation Exposure
- Environmental/ Occupational Exposures
 - o Asbestos
 - o Radon
 - o Passive Smoke



Lung Cancer: Symptoms

- Cough
- Dyspnea
- Hemoptysis
- Recurrent infections
- Chest pain



Lung Cancer: Symptoms

- Symptoms related to distant metastases
 - o Pain
 - o Organ-related
- General Symptoms
 - o Weight loss
 - o Fatigue

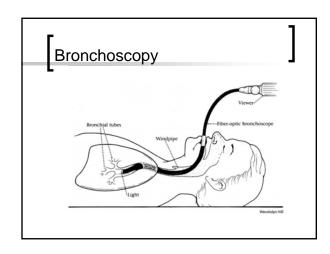
Lung Cancer: Screening

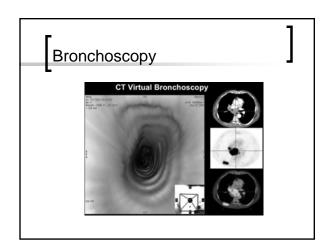
- No proven effective screening tool to date
- Numerous studies in progress to determine most effective screening for lung cancer
 - o Chest X-ray
 - o CT scan
 - o Sputum analysis

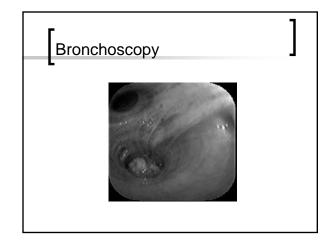
Lung Cancer: Diagnosis

- Chest X-ray
- Bronchoscopy
- CT Scans
- Needle Biopsy
- PET/CT Scans
- Surgical Biopsy

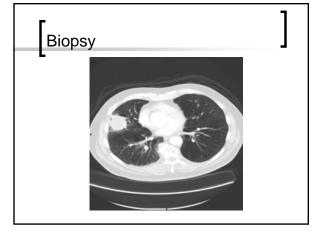
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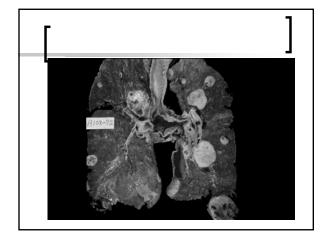


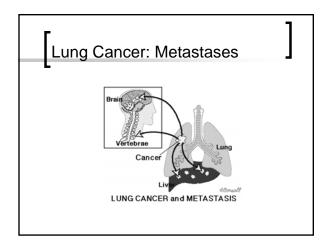
PET/CT Scans



Lung Cancer: Metastatic Sites

- Lymph Nodes
- Brain
- Bones
- Liver
- Lung/Pleura
- Adrenal Gland





Non Small Cell Lung Cancer (NSCLC)

Small Cell Lung Cancer (SCLC)

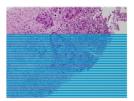
Lung Cancer: Types

Non Small Cell Lung Cancer

- 80% of all lung cancers are NSCLC
- Survival is improved when found at an early stage
- Three distinct types of NSCLC
- Treatments are the same

NSCLC: Types

- Adenocarcinoma
- Squamous Cell Carcinoma
- Large Cell Carcinoma



NSCLC: TNM Staging

- Stages are 1-4; with 4 being the worst
- Stage is determined by looking at 3 separate components
 - T= Tumor size
 - N= Lymph node involvement
 - o M= Absence or presence of metastases

NSCLC: Treatment Description Treatment Options Stage I Single Tumor Surgery Spread to the lymph nodes of the lung Stage II Surgery Spread to lymph nodes in the tracheal area, chest wall or diaphragm Chemotherapy followed by radiation or surgery Stage IIIa Spread to lymph nodes of opposite lung or in the Combination of chemotherapy and Stage IIIb Tumor had spread beyond the chest Chemotherapy and/or palliative care Stage IV

NSCLC: Su	urvival]
Stage I II IIIa IIIb IV	5-year Survival 60-80% 40-50% 25-30% 5-10% <1%	

Surgery]

Surgery

- Surgery is done if there is an increased life expectancy after the procedure
- Surgery is not for metastatic lung cancer
- The earlier a cancer is caught the more likely that surgery will be curative



Advances in Surgery

- More procedures done using minimally invasive techniques
- Clinical trials are looking at diagnostic protocols
- Surgeons are looking at new techniques to decrease local recurrence rates

http://www.cancer.gov/nlst

Small Cell Lung Cancer (SCLC)

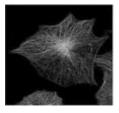
- Most aggressive type of lung cancer
- Responds to chemotherapy and radiation
- Recurrence rates are high

SCLC: Types

Oat Cell

Intermediate

Combined



SCLC: Staging

- Limited
 - Tumor is in one lung, the mediastinum, and lymph nodes that can be radiated using a single radiation port.
- Extensive
 - Tumor has spread beyond one lung, the mediastinum and local lymph nodes.

SCLC: Treatment

- Limited Disease
 - o Chemotherapy
 - o Concomitant Radiation
 - o Prophylactic Cranial Radiation
- Extensive Disease
 - o Chemotherapy
 - o Palliative Radiation

SCLC: Chemotherapy



SCLC: Chemotherapy

- A combination of chemotherapeutic agents is used
- Goal: improve disease-free interval and length of survival
- Research is ongoing
 - o New agents
 - Vaccines
 - o Radiation protocols

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SCLC: Survival

- Limited Disease:
 - o Median survival 18-20 months
 - o 5-year survival 10%
- Extensive Disease:
 - o Median survival 10-12 months
 - o 5-year survival 1-2%

Radiation

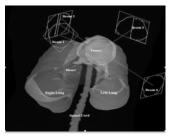


Figure 1. 3D conformal radiation treatment planning. Multiple fields of radiation are shaped to treat a lung tumer. The use of multiple beams (Beams 1-4) also allows normal

Radiation: Intensity-Modulated

"Intensity-modulated radiation therapy (IMRT) is an advanced mode of highprecision radiotherapy that utilizes computer-controlled x-ray accelerators to deliver precise radiation doses to a malignant tumor or specific areas within the tumor."

http://www.radiologyinfo.org/en/info.cfm?pg=imrt

Lung Cancer: The Future



Advances

- Public awareness of the link between smoking and lung cancer has increased
- Therapy has moved away from one size fits all
- People with lung cancer are living longer

The End



References

- Alam, N., Shepherd, D. G., Mackay, J. A., Wvans, W. K., & Members of the Lung Cancer Disease Site Group. (2006). Postoperative adjuvant chemotherapy, with or without guideline. The Annals of Thoracic Surgery, may 1, 2006; 81(5): 1926 1936, 81(5), 1926 1936, 1926 1926, 1926 1926, 1926 1926, 1926 1926, 1926 1926, 1926, 1926

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 Lally, B. E., Zelterman, D., Colasanto, J. M., Haffty, B. G., Detterbeck, F. C., & Wilson, L. D. (2006). Postoperative radiotherapy for stage II or III non-small-cell lung cancer using the surveillance, epidemiology, and end results database. Journal Clinical Oncology, 24, 298.

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 Schild, S. E., Bonner, J. A., Shanahan, T. G., Brooks, B. J., Marks, R. S., Geyer, S. M., et al. (2004). Long-term results of a phase Ill third comparing once-daily radiotherapy with twice-daily radiotherapy with twice-daily radiotherapy with surgery of the control of the con

Targeting Interventions to Populations with Tobacco-use Disparities

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Why? Smoking and lung cancer

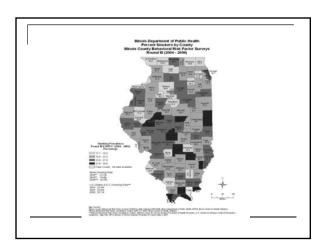
- Definition of populations with tobacco-related disparities:
 "Differences in patterns, prevention, and treatment of tobacco use;
 - differences in the risk, incidence, morbidity, mortality, and burden of tobacco-related illness that exist among specific population groups...;
 - and related differences in capacity and infrastructure, access to resources, and environmental tobacco smoke exposure."

(Source: CDC. Best Practices for Comprehensive Tobacco Control Programs – 2007. Atlanta: U.S. Department of Health and Hums Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Practicing and Health Online 2007.

Where are populations with tobacco use disparities?

■ Everywhere!





Who? Populations with tobacco use disparities in Illinois

- Males
- Age:
 - 18 to 24 year olds
 25 to 34 year olds
- □ 35 to 44 year olds
- Lower educational attainment:
- □ GED Lower income
- Homosexuals and bisexuals
- Pregnant women with no or late access to prenatal care
- Middle East immigrants
- Native Hawaiian/Pacific Islanders
- People residing in rural areas



Data available to identify populations with tobacco use disparities

- County Behavioral Risk Factor System
- http://app.idph.state.il.us/brfss/
- Smoking rates by demographic characteristics
- Adult Tobacco Survey
 - www.idph.state.il.us/TobaccoWebSite/ILATS2007.pdf
- IPLAN Data System
 - http://app.idph.state.il.us/
 - Income, educational attainment, rurality, Medicaid
- U.S. Census
 - www.census.gov
- Local data sources



Recommendations

- CDC Best Practices recommends that a comprehensive tobacco control program include identifying and eliminating tobacco-related disparities among population groups by:
 - Preventing smoking initiation
 - Reducing exposure to secondhand smoke
 - Assisting smokers to quit smoking



Available at: www.cdc.gov/tobacco/tobacco_control_programs/stateandcommunity/best_practices/

Approaches: Reducing exposure to secondhand smoke

- Smoke-free Illinois Act [PA 95-0017]
 - Information available at:
 - www.smoke-free.illinois.gov



Approaches: Cessation

- Local cessation programs
- Illinois Tobacco Quitline:



Where Quitters Always Win! 1-866 Quit-Yes / 1-866-784-8937



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PLAN TO QUIT...



QUIT TO WIN!!!

Purpose



The Illinois Tobacco Quitline is here

for one reason . . .

to help people quit tobacco.

Why Should Tobacco Dependence be Treated?

- Tobacco causes premature death of almost half a million Americans each year
- 1/3 of all tobacco users in this country will die prematurely from tobacco dependence losing an average of 14 years
- 70% of smokers see a physician each year
- 70% of smokers want to quit

The Cost of Tobacco **Dependence in Illinois**

- Nearly 17,000 deaths each year are attributable to tobacco use
- \$6.7 billion in added health care costs/year and lost productivity



Addictions...

- Stopping smoking is difficult because, in order to quit, a person needs to:
 - Overcome addiction to nicotinePhysical Addiction
 - Change the habits of lighting up and inhaling smoke
 - Psychological Addiction



Many Methods of Quitting

- "Cold Turkey"
- "Cutting Back"
- Hypnosis
- Laser Therapy/Auricular Therapy
- Acupuncture
- Nicotine Replacement

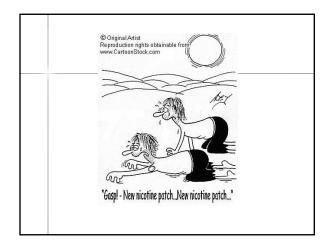






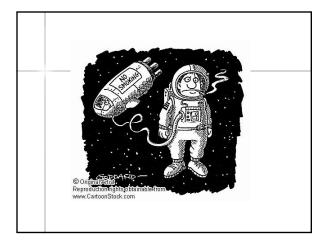


Prescription Medications



Behavioral Modifications





Effective Strategies Medications Ongoing Support

1-866-QUIT-YES



Resources



- Cessation Guide and Information mailed
- Cessation Program is tailored to the callers needs
- One-on-one counseling in Spanish
- Interpretation services for more than 150+ languages
- Telecommunication Line for the Deaf 1-800-501-1068
- Line capacity to handle hundreds of calls per day

Qualified, Experienced Staff



- Registered Nurses
- Registered Respiratory Therapists
- Certified Tobacco Cessation Counselors
- Medical Advisory Board

Hours of Operation

Open Extended Business Hours 7 a.m. to 9 p.m. Monday through Friday

Calls received outside of these times are taken by voice mail – responded to the next working day



Services



- Dual Function
 - Stand Alone Counseling Cessation Program
 one-on-one over the phone
 - Alongside or in Follow Up to other cessation efforts
- Reactive Services: Client phones→ Counselor weekly
- Proactive Services: Counselor phones → Client, at scheduled intervals
- Unlimited Services

How does it work?

- Clients are educated in the newest techniques
- Individualized quitting plans are developed and may include:
 - Behavioral Modification Techniques
 - Nicotine Replacement Products
 - Medication Therapy

All the tools are there...



Packets

Tobacco Cessation Information Packet is provided:

- nicotine replacement
- prescription medication
- behavior modification
- the recovery process
- withdrawal symptoms
- tips for cravings, coping, stress management

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Benefits



Quitline staff offer encouragement and support throughout the quitting process

Quitlines can increase success by up to 56%!



5 Steps to Helping People Quit

- The 5 A's
- **ASK** about tobacco use.
- **ADVISE** to quit.
- **ASSESS** willingness to make a quit attempt.
- ASSIST in quit attempt.
- **ARRANGE** for follow-up

Free Promotional Tools

...promote through company intranet, use print materials in break rooms, offer enrollment forms through company nurse or during routine health screenings...

- Coasters Tear Off Style Pads
- Brochures (English & Spanish)
- Window Clings
- Posters
- Magnets
- Enrollment Forms
- Power Point Presentation
- Print Ads

The Illinois Tobacco Quitline

	AND DESCRIPTION OF THE PARTY OF
ILLINOIS	ILLINOIS The Quitline staff offers encouragement and support throughout the quitting SERVICES: process and can help you:
TOBACCO UITLINE Where Children Albertys Wind	Develop a clear plan for quitting Select the best strategies for you Determine the proper dasage of nicotine products Work on healthy behaviors to help prevent relique
1-866-QUIT-YES 1-866-784-8937 MONDAY - FRIDAY 7AM - 77M	+ AMERICAN PUBLIC ASSOCIATION. PUBLIC HEALTH
	Use of GUTILPAE services can improve surcess rates up to 56%

Telecommunication Line for the Deaf: 1-800-501-1068 The Quitline's knowledgeable staff is waiting to serve you

Break the Habit



Babs Frederking, RN Health Educator/Tobacco Coordinator Washington County Health Dept. 618-327-3644 wchd191@yahoo.com



Break the Habit

- WHAT IS BREAK THE HABIT??????
- In the beginning there was IDPH Office of Health Promotion Division of Chronic Disease Prevention & Control - whew!
- Then there was Tobacco Settlement **Funds**
- Then there was Illinois Tobacco Free **Communities Grants**
- And then there was Break the Habit!

Break the Habit

- Washington County Health Department was the first to pilot the Break the Habit Program in 2001-2002.
- The following year 2 other counties jumped on board
- Break the Habit offered state wide for FY 2006 ITFC grantees.
- Counties that now offer break the habit have grown tremendously!

Break the Habit

- HOW THE PROGRAM WORKS
- Individuals are referred
- Individuals are then screened for funding. If approved, agreement is signed
- Now it's on to the ITQ Illinois Tobacco Quitline
- ITQ makes contact with health department via e-mail

Break the Habit

- HD makes contact with participant for further instructions
- HD notifies pharmacy of new participant
- Educational material is given to participant
- Participants are followed up at 3, 6, & 12 months.
- In a nutshell

Break the Habit

- SUCCESS RATES
- This will be brief!!
- From FY 04 to date, 20 25% of our participants were tobacco free at the 1 year follow up contact.
- ITQ calls for Washington County FY 04

Break the Habit

- WRAP IT UP!
- Flexible program
- What helps make the program work
- Thank you so much for your time. Please feel free to contact me.

HAVE A WONDERFUL DAY!!!





Improving Life, One Breath at a Time

MISSION: A WORLD FREE OF LUNG DISEASE

RADON: ARE YOU AT RISK?

Angela Tin, M.S.

Director of Environmental Programs American Lung Association of Illinois (217) 787-5864

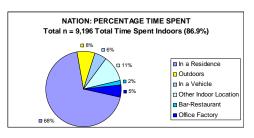
atin@lungil.org



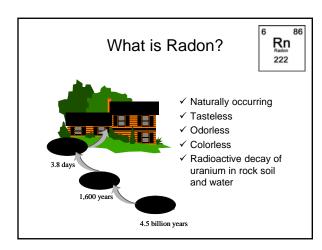
RADON: ARE YOU AT RISK?

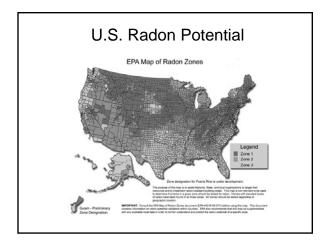
- Where do we spend most of our time?
- ❖ What is radon?
- How do we measure exposure?
- What is the level of concern?
- How and why does it come into my home?
- How does radon affect the lungs?
- How and where can I sample for radon?
- What if there is radon in my home?
- What can local health departments do?

National Human Activity Pattern Survey: Time Spent Indoors



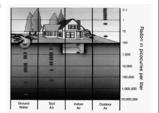
Source: Ott, Klepeis, and Switzer, Journal of the Air & Waste Management Association, 2003





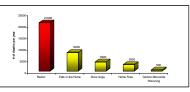
Radon Facts

- All homes have some levels of radon
- High levels in every county / every state
 Influenced by nature outside the home
- Controlled by man once inside the home
- Primary exposure through inhalation
- Secondary exposure through water supply



How Do We Measure Exposure?

- Radioactive alpha radiation on lung tissue
- Class A human carcinogen
- Greatest source of radiation to public
- Historical miner studies
- More likely to die from radon accidents, drowning, or fires



What is the Level of Concern?

- EPA estimates 21,000 (or 12%) lung cancer deaths per year attributable to radon
- Average indoor radon concentration 1.3 piC/L
- EPA action level is 4.0 piC/L
- USEPA estimates that ¼ of all radon related lung cancers can be averted by lowering radon levels below the 4.0 piC/L
- More than 40,000 homes in Illinois have been tested in the last two years
- Over 40% of homes above EPA action level

How is Radon Influenced by Cigarette Smoke?

- Radon binds dust particles or cigarette smoke
- Indoor smoke increases the amount of dust in a room as much as 600 times
- Health effects multiplied with cigarette smoke
- Leading cause of cancer in non-smokers



How Does Radon Enter the Home?

- Natural source
 - Soil and rock
 - Ground water supply
- Man made
 - Utilities and plumbing
 - Foundation cracks
 - Building material



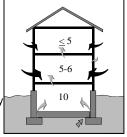
How Does Radon Affect the Lungs?

- Radon decays into radioactive particles known as radon decay products.
- These particles are easily inhaled and deposited in the lungs where they can damage sensitive lung tissue.



How is Radon Distributed?

- Radon enters from beneath foundation and travels upward.
 - Diluted with outdoor air infiltrating building
- If radon is less than 4 pCi/L in lower level, upper floors are probably less than 4 pCi/L.



How Can I Sample For Radon?

- Most homes/apts should be tested
- At least once every two years
- Foundation footprint
- Illinois free residential test kits
- Closed house conditions
- Seasonal effects
- Short term activated charcoal
- Long term more sensitive
- Water sampling (well)





What if Radon Is Above the EPA Action Levels?

- Licensing Illinois Emergency Management Agency
- Licensed measurement professional
- Licensed mitigation professional
- Mitigation standards and requirements
- Equipment /installation costs \$1000 \$1500
- On-going operating cost of fan
- Side benefit of moisture and odor removal

What is Radon Mitigation?



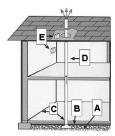


Sub slab (sub-membrane) depressurization is a means of removing radon beneath the foundation and venting the gas away from the building. One or more suction pipes are placed through the ground or soil and a fan is attached to facilitate the ventilation process.

New Homes Built With Radon Control Systems

Radon Resistant New Construction

- This involves techniques that reduce radon entry as well as make radon removal easier and less costly.
 These methods vary with different foundations and site requirements, but basic elements are:
- A. Gas Permeable Layer
- B. Plastic Sheeting
- C. Sealing and Caulking
- D. Vent Pipe
- E. Junction Box



Legislation, Rules, and Regulations

- Radon Industry Licensing Act (420 ILCS 44)
- Radon Awareness Act (420 ILCS 46) (1/1/08)
 - Residential testing disclosure
- ➤ Proposed Radon Resistant New Construction Requirements



What can Local Health Departments Do In Their Communities to Impact Radon?

- Raise awareness regarding health effects
- Provide education additive effects of tobacco
- Include radon as an element of tobacco programs
- Several LHD's are currently providing test-kits through grant from Illinois EMA
- Participate in radon forums expanding to awareness of medical community

Radon Websites and Resources

- Mike Murphy USEPA www.epa.gov/radon
- Pat Daniels II Emergency Management Agency www.radon.illinois.gov
- ALA online requests for test kits www.lung.il.org/environment/radon.cfm
- May 9, 2009 Medical Forum in Schaumburg, IL

Barbara Sorgatz, B.S. Lung Cancer Survivor ringer234@sbcglobal.net



Radon Induced Lung Cancer Survivor

- Diagnosis
- Treatment
- Prognosis
- Life Afterwards

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Resources

www.lungil.org/tobacco/clinics.cfm - Cessation clinics in Illinois www.quityes.org Illinois Tobacco Quitline Website www.lungusa.org American Lung Association Website www.lungcanceralliance.org Lung Cancer Alliance www.cancer.org American Cancer Society www.cancer.gov National Cancer Institute www.thewellnesscommunity.org The Wellness Community www.pprx.org Partnership for Prescription Assistance www.chestnet.org American College of Chest Physicians Additional resources and the links above are all posted on the IPHI website at www.iphionline.org.

Feedback

- Thank you for participating!
- Your feedback is VERY important. Please complete the online evaluation survey: http://www.surveymonkey.com/s.aspx?sm=TWN rE 2bSAthC4XFCObOUjzw 3d 3d
- If you registered for a group, please ask them to complete the evaluation also.
- We will use this information to plan future sessions and continually improve.





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Question and Answer Session

- Please join us now for a LIVE Q & A Session with the presenters:
 - Dial 1(877) 411-9748
 - Enter the access code: 3467868#
 - Mute your phone (*6 to mute or un-mute).
- If you have a question that is not addressed on the conference call, please email the question to Laurie Call at LLC1185@msn.com.





