



# Exposure Risks: Carcinogens

Urban Fire Forum  
September 22, 2017

# AT THE FIRE STATION



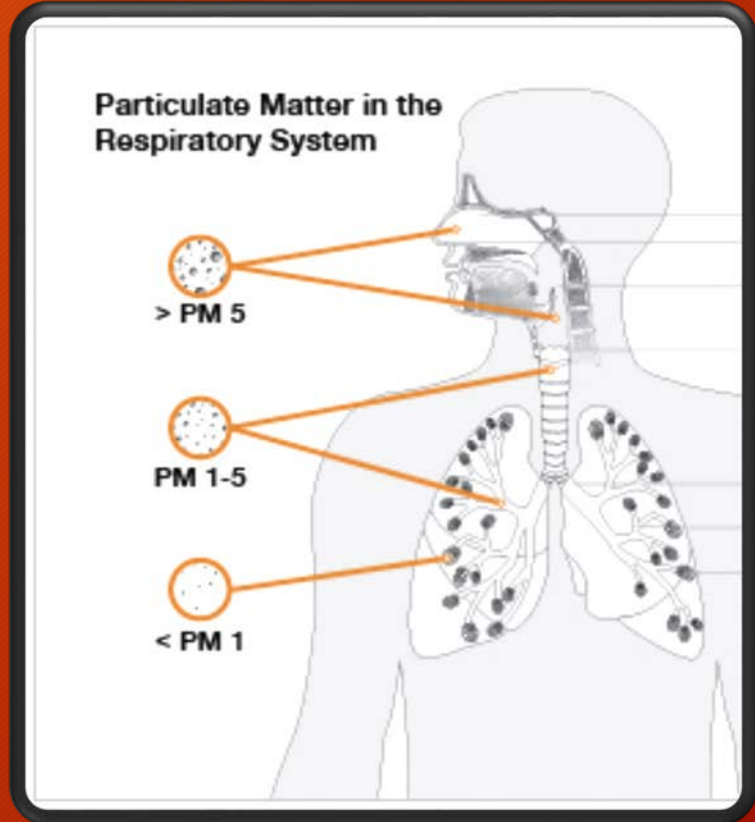
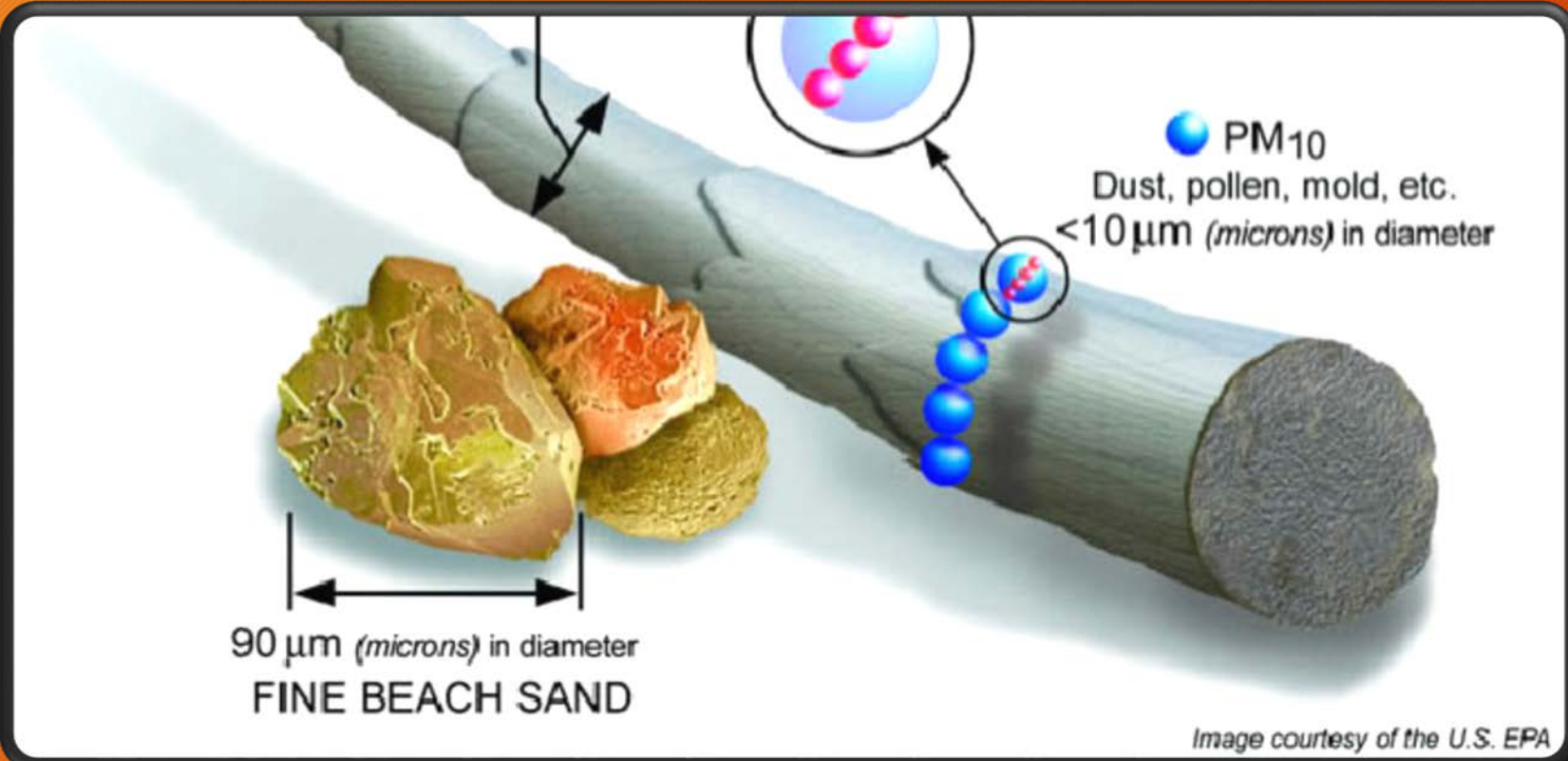
- Proper use of diesel exhaust containment systems.
- Proper sealing of doors leading to living/office areas.
- Keep turnout gear (PPE) outside of living/office areas.
  - Do not walk in living/office areas with dirty boots and gear after a fire.
- Report any damage to asbestos wrapped pipe encapsulation in fire stations.
- Use nitrile gloves when cleaning/maintaining dirty tools and equipment.
- Wash hands thoroughly after handling tools/equipment, dirty station wear, & PPE.



# AT THE FIRE SCENE



- Wear PPE properly.
- Use SCBA from the initial attack through the completion of overhaul.
- Do not rely on multiple gas detectors to determine PPE/SCBA donning and doffing.
- Gently rinse or brush off fire debris and soot, and place PPE in a large contractor's garbage bag before entering apparatus to return to station.
- Use wet naps to clean hands, neck, throat, jaw, and face after fire operations are complete.



# Particulate Matter

99% of smoke particles collected during overhaul were less than 1 micron in diameter



# AFTER THE FIRE



- Clean all PPE, including helmets, hoods, and gloves.
  - All PPE must be cleaned in accordance with NFPA1851 *Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*, and manufacturer recommendations.
  - Wear nitrile gloves.
- Clean tools, equipment, SCBA, and the inside of the apparatus cab.
  - Wear nitrile gloves.
- Shower thoroughly and change into clean station work clothes.
- Do not take soiled PPE or dirty work clothes home.
- Never transport soiled PPE in a personal vehicle. Have it returned to station via fire apparatus.

# SELF ACTIONS



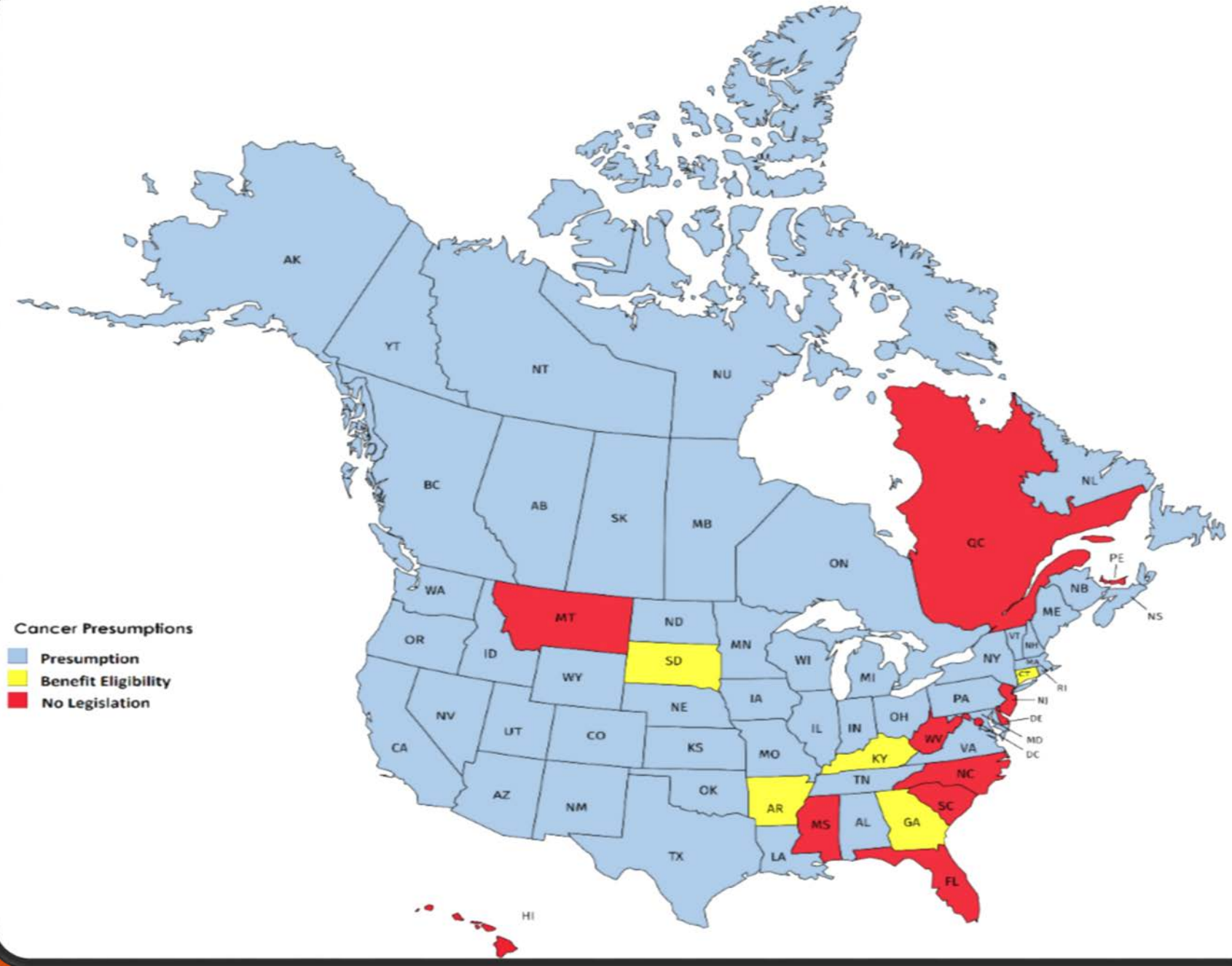
- Eliminate the attitude “The dirtier the gear, the tougher and more experienced I am” attitude.
- On assignments from station-to-station, place gear in a zippered gear bag or in a container with lid.
- Don’t smoke or chew tobacco
- Watch your diet and control your weight.
- Exercise regularly.
- Use alcohol in moderation.
- Use sunscreen.
- Have an annual medical exam.
- Have appropriate cancer screenings. Early detection and treatment are essential.





# Presumption

- A fact assumed to be true
- May or may not be certain, but probable
- Capable of being rebutted by contrary proof



**Cancer Presumptions**  
■ Presumption  
■ Benefit Eligibility  
■ No Legislation







# Common Statutory Language

- Some common language:
  - Pre-employment medical
  - Member must demonstrate he/she was exposed
  - Cancer must be reasonably linked
  - Carcinogen is reasonably associated w/ the disabling cancer's primary site
  - Cancer caused by contact with a toxic substance
  - Defined period of coverage
  - Rebuttable



# Period of Coverage

- 8 States - no requirements for time served as a fire fighter before the presumption applies, time the presumption applies post service period, or some combination of both
- 12 States require 5 years of service
- 4 States require 10 years
- 1 State each requires 3 years, 4 years, 7 years, 8 years and 12 years





# Period of Coverage

- 6 states extend coverage to 5 years post service
- 2 States to 10 years
- 2 states to 20 years
- 1 state to 600 weeks (11.5 years)
- 1 state to 3 months
- 2 states require 65 years old or younger
- 1 state requires 68 or younger
- Canadian provinces require various service times based on the type of cancer but none appear to have a post retirement sunset date



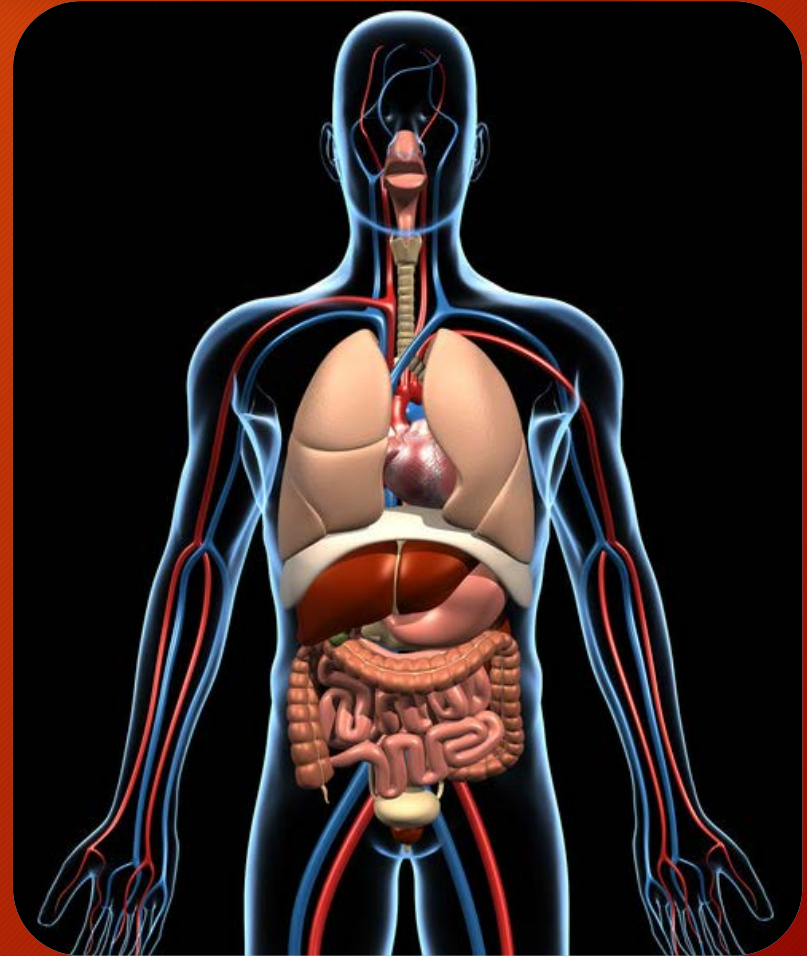
# Rebuttal

1. The disease resulted from a specific non-occupational cause (risk factors)
2. The disease was not caused by the employment



# Pre-Employment Medical

- Requirement for most statutes
- No evidence of cancer at time of employment





# Burden of Proof Shifts

More difficult test-

1. Must prove exposure
2. Exposure caused harm
3. Causal connection must be made







# Burden of Proof

- Presumption can be rebutted by preponderance of the evidence
- Contrary can be shown by competent evidence
- Clear and convincing medical evidence that the cause of the condition is unrelated to the FF's employment
- Presumption can be overcome by a preponderance of competent evidence to the contrary

# Preponderance

- Lowest burden of proof
- Evidence persuades that the facts are more probably weighted one way than the other





# Clear and Convincing Evidence

- Middle burden of proof
- Evidence so clear, direct, weighty in terms of quality, and convincing to cause you to come to a clear conviction of truth
- A high probability of truth



# Beyond a Reasonable Doubt

- Highest burden of proof
- Evidence so strong, only a remote possibility of an extenuating circumstance may exist
- Not intended for workers comp or presumptive laws
- Criminal courts







# Burden of Proof

Preponderance

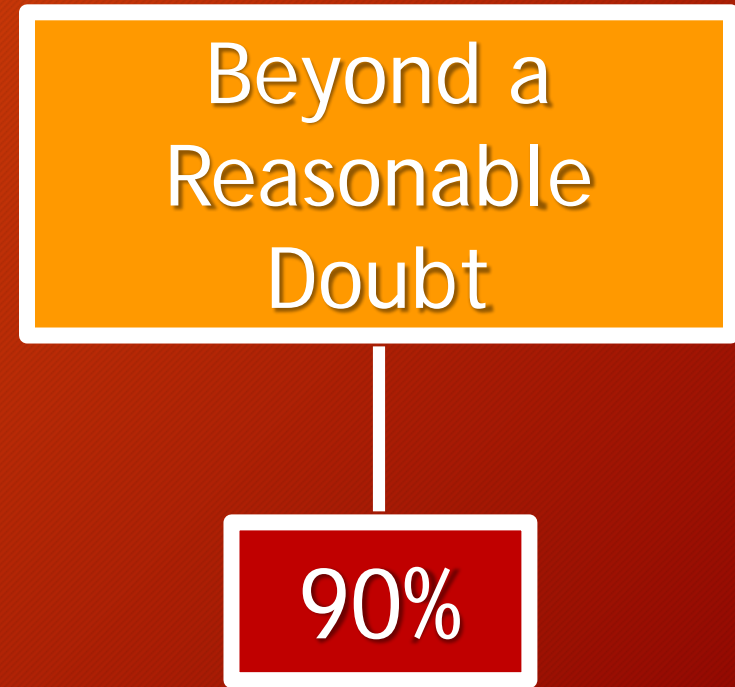
51%

Clear and  
Convincing

65%

Beyond a  
Reasonable  
Doubt

90%



# Resources



[IAFF Home](#) [PHI Home](#)

## PRESUMPTIVE HEALTH INITIATIVE

SEARCH BY  
STATE OR PROVINCE

SEARCH BY  
DISEASE OR CONDITION

*How do these laws benefit fire fighters and EMS workers?*

*What are the limitations of presumptive disability laws?*

*How can I bring presumptive disability laws to my state, province, or municipality?*

*The history of disability laws*

*Presumptive Legislative Stories*



Click the printer icon to print these presumptive legislation topics

### Welcome to the IAFF presumptive disability provisions database for the United States and Canada

***A presumptive disability law links a particular occupation with a disease or condition that has been shown to be a hazard associated with that occupation.***

As a result of this linkage, if an individual employed in the occupation covered by the presumption contracts a disease or condition that is specified in the presumptive law, then that disease or condition is presumed to have come from that occupation. In this case, the burden of proof shifts from the employee to the employer to demonstrate that the condition was not in fact associated with the occupation but with another cause.

For fire fighters and emergency medical responders, scientific evidence has demonstrated an increased risk for heart disease, lung disease, cancer and infectious diseases. At this time, most of the United States and Canadian provinces have some form of presumptive law that applies to fire fighters and emergency response personnel. These laws vary greatly between states and provinces.

The IAFF Division of Occupational Health, Safety & Medicine has developed an information database of the current presumptive disability provisions in the United States and Canada.



# Resources

**IFF PRESUMPTIVE HEALTH INITIATIVE**

IAFF Home PHI Home

SEARCH BY STATE OR PROVINCE SEARCH BY DISEASE OR CONDITION

Hover over a state/province to read a summary of Presumptive Law coverage in that area. Click the desired state/province to access more information.

State: Arizona  
Coverage: Cancer  
Code Part:  
Arizona Code  
Title 23 Labour  
Chapter 6 Workers' Compensation  
Article 1 - Scope of Workers' Compensation Occupational disease;  
proximate causation, definition

**IFF PRESUMPTIVE HEALTH INITIATIVE**

IAFF Home PHI Home

SEARCH BY STATE OR PROVINCE SEARCH BY DISEASE OR CONDITION

### Presumptive Disability Law in Arizona

Click the printer icon to print information about this state

CODE PART:  
Arizona Code  
Title 23 Labour  
Chapter 6 Workers' Compensation  
Article 1 - Scope of Workers' Compensation Occupational disease; proximate causation; definition

[Arizona Legislative Website](#)

DESCRIPTION:  
23-901.01.  
Occupational disease; proximate causation; definitions

- The occupational diseases as defined by section 23-901, paragraph 13, subdivision (c) shall be deemed to arise out of the employment only if all of the following six requirements exist: ( from 23-901-13-c = (c) An occupational disease which is due to causes and conditions characteristic of and peculiar to a particular trade, occupation, process or employment, and not the ordinary diseases to which the general public is exposed, and subject to section 23-901.01.)
  - There is a direct causal connection between the conditions under which the work is performed and the occupational disease.
  - The disease can be seen to have followed as a natural incident of the work as a result of the exposure occasioned by the nature of the employment.
  - The disease can be fairly traced to the employment as the proximate cause.
  - The disease does not come from a hazard to which workers would have been equally exposed outside of the employment.
  - The disease is incidental to the character of the business and not independent of the relation of employer and employee.
  - The disease after its contraction appears to have had its origin in a risk connected with the employment, and to have flowed from that source as a natural consequence, although it need not have been foreseen or expected.
- Notwithstanding subsection A of this section and section 23-1043.01.
  - Any disease, infirmity or impairment of a firefighter's or peace officer's health that is caused by brain, bladder, rectal or colon cancer, lymphoma, leukemia or adenocarcinoma or mesothelioma of the respiratory tract and that results in disability or death is presumed to be an occupational disease as defined in section 23-901, paragraph 13, subdivision (c) and is deemed to arise out of employment.
  - Any disease, infirmity or impairment of a firefighter's health that is caused by buccal cavity and pharynx, esophagus, large intestine, lung, kidney, prostate, skin, stomach or testicular cancer or non-hodgkin's lymphoma, multiple myeloma or malignant melanoma and that results in disability or death is presumed to be an occupational disease as defined in section 23-901, paragraph 13, subdivision (c) and is deemed to arise out of employment.
- The presumptions provided in subsection B of this section are granted if all of the following apply:
  - The firefighter or peace officer passed a physical examination before employment and the examination did not indicate evidence of cancer.
  - The firefighter or peace officer was assigned to hazardous duty for at least five years.
  - The firefighter or peace officer was exposed to a known carcinogen as defined by the international agency for research on cancer and informed the department of this exposure, and the carcinogen is reasonably related to the cancer.
  - For the presumption provided in subsection b, paragraph 2 of this section, the firefighter received a physical examination that is reasonably aligned with the national fire protection association standard on comprehensive occupational medical program for fire departments (NFFA 1582).
- Subsection B of this section applies to former firefighters or peace officers who are sixty-five years of age or younger and who are diagnosed



# Points to Remember

- Understand your law and how its written
- Understand how your State/Province defines the balance of probability (case law)
- Presumptive is not 100%. Guaranteed
- Challenges from employers, work comp, and pension