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# **413 B Examination Case Studies**

## **The Miners Clinic of Colorado**

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# DOL Exam (413b exam)

- 413b exam includes:
  - Medical and work history
  - Physical exam
  - Chest X-ray with B read
  - Spirometry (breathing test), pre and post inhaled bronchodilator
  - Arterial blood gas test (rest and sometimes with exercise)
  - EKG (optional)
- Examining physician submits findings, diagnosis and opinion to the claims examiner.

# DOL exam must show 4 things:

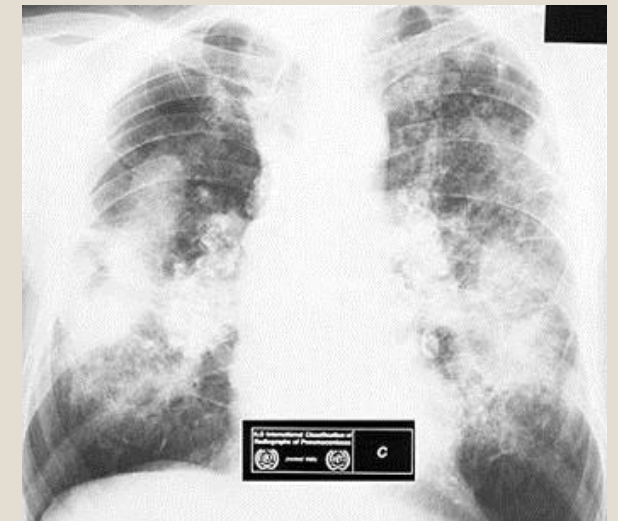
1. Presence of Black Lung
2. The disease arose out of coal mine employment
3. Total disability (the miner is not able to return to his or her last coal mine work or any comparable employment due to respiratory impairment)
4. Total disability is due to Black Lung

# Definitions

- Rebuttable presumption – a presumption made by the court which is taken to be true unless someone proves otherwise
- Irrebuttable presumption – a presumption which cannot be overcome or changed by additional evidence or argument

# Presence of Black Lung

- Chest x-ray
  - B read of 1/0 or higher is positive (medical pneumoconiosis)
- Biopsy or autopsy evidence
- Physician's opinion
- Irrebuttable presumption
  - A miner is totally disabled due to Black Lung when an x-ray or biopsy/autopsy shows progressive massive fibrosis (PMF)



DATE OF RADIOGRAPH

MONTH	DAY	YEAR
<input type="text"/>	<input type="text"/>	<input type="text"/>

CENTERS FOR DISEASE CONTROL & PREVENTION  
National Institute for Occupational Safety and Health  
Federal Mine Safety and Health Act of 1977  
Medical Examination Program

Coal Workers' Health Surveillance Program  
NIOSH  
PO Box 4258  
Morgantown, West Virginia 26504

WORKER'S Social Security Number

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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ROENTGENOGRAPHIC INTERPRETATION

TYPE OF READING

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A	B	P

FACILITY IDENTIFICATION

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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Note: Please record your interpretation of a single film by placing an "x" in the appropriate boxes on this form.

1. FILM QUALITY

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	U/R

(If not Grade 1, mark all boxes that apply)

<input type="checkbox"/> Overexposed (dark)	<input type="checkbox"/> Improper position	<input type="checkbox"/> Underinflation
<input type="checkbox"/> Underexposed (light)	<input type="checkbox"/> Poor contrast	<input type="checkbox"/> Mottle
<input type="checkbox"/> Artifacts	<input type="checkbox"/> Poor processing	<input type="checkbox"/> Other (please specify)

2A. ANY PARENCHYMAL ABNORMALITIES CONSISTENT WITH PNEUMOCONIOSIS?

YES  Complete Sections 2B and 2C      NO  Proceed to Section 3A

2B. SMALL OPACITIES

a. SHAPE/SIZE		b. ZONES	
PRIMARY	SECONDARY	R	L
<input type="checkbox"/> p	<input type="checkbox"/> s	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> q	<input type="checkbox"/> t	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> r	<input type="checkbox"/> u	<input type="checkbox"/>	<input type="checkbox"/>

UPPER  
MIDDLE  
LOWER

c. PROFUSION

<input type="checkbox"/> 0/-	<input type="checkbox"/> 0/0	<input type="checkbox"/> 0/1
<input type="checkbox"/> 1/0	<input type="checkbox"/> 1/1	<input type="checkbox"/> 1/2
<input type="checkbox"/> 2/1	<input type="checkbox"/> 2/2	<input type="checkbox"/> 2/3
<input type="checkbox"/> 3/2	<input type="checkbox"/> 3/3	<input type="checkbox"/> 3/+

2C. LARGE OPACITIES

SIZE  O  A  B  C      Proceed to Section 3A

3A. ANY PLEURAL ABNORMALITIES CONSISTENT WITH PNEUMOCONIOSIS?

YES  Complete Sections 3B, 3C      NO  Proceed to Section 4A

3B. PLEURAL PLAQUES (mark site, calcification, extent, and width)

Chest wall	Site			Calcification		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In profile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Face on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diaphragm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other site(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Extent (chest wall; combined for in profile and face on)  
Up to 1/4 of lateral chest wall = 1  
1/4 to 1/2 of lateral chest wall = 2  
> 1/2 of lateral chest wall = 3

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	2	3	1	2	3	

Width (in profile only)  
(3mm minimum width required)  
3 to 5 mm = a  
5 to 10 mm = b  
> 10 mm = c

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a	b	c	a	b	c	

Proceed to

Proceed to

# Proof that disease arose from coal mine employment

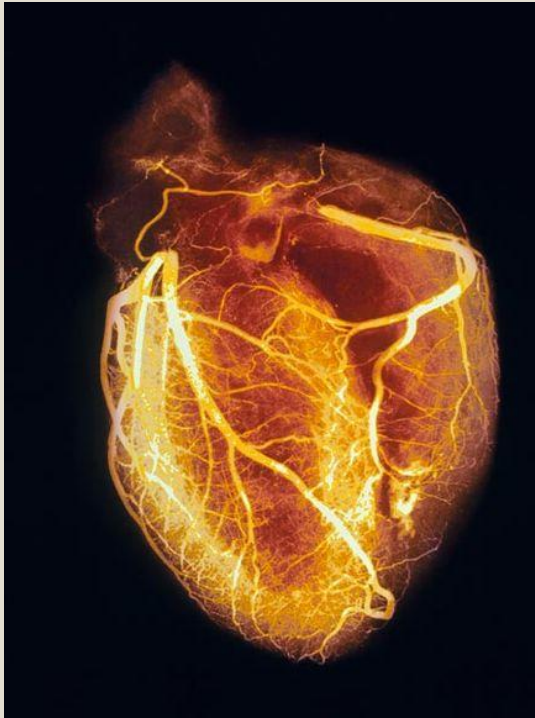
- 10 years or more in coal mining – presumption that disease arose from mine employment, employer has the burden of disproving it
- 8-10 years – miner may still win when it is difficult for the employer to show some other cause
- Less than 8 years – difficult for miner to win unless there is strong medical evidence

Exposure  $\neq$  Disease

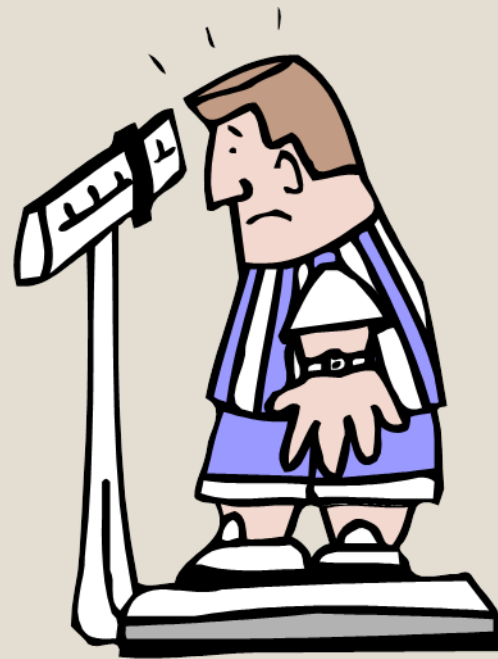
Symptoms  $\neq$  Disease



# Lots of things cause shortness of breath



<http://science.nationalgeographic.com>



<http://www.yourstopsmokingplace.com>

# Proof of total disability

- Four possible ways:
  1. Pulmonary function studies that qualify under Part 718-Appendix B
  2. Arterial blood gas studies that qualify under Part 718-Appendix C
  3. Diagnosis of cor pulmonale or right sided congestive heart failure; or
  4. A documented and reasoned physician's opinion.

# Proof of total disability due to Black Lung

- A physician must reach this conclusion in the written report.
- **Documented and well reasoned**
- If other medical conditions contribute to the disability, the miner need only show that Black Lung is a **substantially contributing cause**.

# Byrd Amendments

- Rebuttable presumption
  - If the miner worked at least **15 years** and has a **totally disabling lung impairment**, miner is presumed to be disabled due to Black Lung
  - Burden is on employer to disprove
  - Applies to claims filed after January 1, 2005

# Submitting Additional Evidence

- Claims examiner reviews medical evidence and work history
- Issues **Schedule for the Submission of Additional Evidence (SSAE)**
- Responsible Operator (RO) and claimant have 60 days to submit additional evidence
- Each party then has 30 days to respond to the evidence of the other party

# Remember...

- RO can have the miner examined by a physician of their choice.
- If the miner refuses to be examined, the claim may be denied.

# Recently...

- Center for Public Integrity investigation
- For miners who worked **more than 15 years** and were **awarded benefits** on preliminary determination, the claims examiner will ask the DOL 413b physician to review the RO's evidence and **provide a supplementary opinion**.

# Proposed Decision and Order

- Claims examiner will review the evidence and issue a final decision which is called the **Proposed Decision and Order (PDO)**.
- Either party can appeal the decision.
- The claim will move to the Administrative Law Judge (ALJ) for a formal hearing.
- If the claimant is denied benefits, he or she can **withdraw the claim** and file again in the future.



# Case study # 1: Miner

- 80 year old
- Former Miner
- History of surface coal mining (1974-1996)
  - Worked as a laborer
- Never smoker

# 2009 Clinic findings

- Symptoms: breathlessness, wheezing and cough
- Chest X-ray B read findings: 2/3 profusion
- Unable to perform spirometry
- We recommended filing for Black Lung benefits because of B read findings

# Black Lung Claim Timeline

- May 2010 – Forms sent to DOL
- June 2010 – DOL exam: abnormal CXR and resting ABG due to coal mine dust exposure (nonsmoker)
- November 2010 – District Director awarded benefits
- RO appealed decision
- April 2011 – RO exam: Interstitial Lung Disease
- April 2012 – Miner started working with attorney
- August 2014 – Dr.'s opinion on RO evidence
- September 2014 - ALJ hearing
  - RO agreed to pay benefits before ALJ's decision

# Case study #2: Miner

- 86 y/o former miner
- Symptoms:
  - Daily cough
  - Productive of clear-yellow phlegm
  - Dyspnea with stairs and inclines
- Tobacco history:
  - 4-pk-year smoking history (1ppd from age 18-22)

# Case Study #2

- Exposures:
  - Coal mine dust for 43 years (1941-1984) – (machine helper, driller, loader operator, etc)
  - Underground for 2/3 of this time.
  - Physical demands of last coal mine job as supervisor of surface maintenance – walk 1-2 miles/day, no heavy lifting, 30-40% office based.

# Chest X-ray Result



B-read: 1/1 profusion with s/p opacities in all lung

# Spirometry

	Baseline	% Pred	Post-BD	% Pred	Change
FVC	3.45 L	116%	3.57 L	120%	3%
FEV1	2.13 L	96%	2.23L	100%	5%
FEV1/FV C	62%		62%		

Interpretation: Normal spirometry. No bronchodilator response

# Question

- Do you think this miner has Black Lung?
- Is this patient likely to be totally impaired from performing his last coal mine job?
- Should this patient apply for Black Lung Benefits?



# Arterial Blood Gases

	pH	PaCO <sub>2</sub>	PaO <sub>2</sub>	SaO <sub>2</sub>
Rest	7.40	36 mmHg	70 mmHg	93%
End Walk	7.40	36 mmHg	76 mmHg	93%

Interpretation: Normal arterial oxygen content at rest and with exertion (reference range: paO<sub>2</sub> 65-75 mmHg).

# Final Assessment

- 43 years of coal mine dust exposure
- Chest x-ray evidence of coal workers pneumonconiosis

**BUT**

- Normal spirometry
- Normal resting and exercise arterial blood gas

**THEREFORE**

- Coal mine dust lung disease does not meet DOL criteria for totally disabling this patient from performing his last coal mine job.

# Need proof of the following for a survivors claim

- Presence of Black Lung in deceased miner
- Disease arose out of coal mine employment
- Miner's death was substantially due, in part, to Black Lung

# Proof of presence of Black Lung for survivor's claim

- Shown by X-ray or autopsy evidence
- Irrebuttable presumption that a miner's death was due to Black Lung at the time of death when a x-ray or biopsy or autopsy evidence shows Progressive Massive Fibrosis (PMF) – opacity greater than 1 cm in diameter

# Proof that disease arose out of coal mine employment: survivor's claim

- Same as proof needed for miners claim:
  - 10 years or more in mining – presumption that disease arose from coal mine employment, employer has the burden of disproving it
  - 8-10 years – may still win because it is difficult for the employer to show some other cause
  - Less than 8 years – difficult to win unless there is no relevant exposure and there is strong medical evidence

# Proof that disease substantially contributed at least in part to death

- To show link between Black Lung and miner's death:
  - Use pathologist's opinion if there is an autopsy
  - Use pulmonologist's opinion (with or without autopsy)

# Case Study #3: Widow

- 64 year old coal miner - deceased
- Employment History
  - 18 years of coal mine employment at a surface coal mine
  - Worked as mobile equipment operator and as driller/shooter, and lead driller/shooter

# Medical History

- Never Smoker
- Type 2 diabetes mellitus, high blood pressure, high cholesterol, chronic knee pain
- Developed pneumonia twice in one year
- Second time pneumonia complicate by sepsis, multi-organ failure with respiratory failure resulting in death.
- Medical record during hospitalization for pneumonia mentions – “component of pneumoconiosis”



# Imaging Findings

- Chest x-ray: patchy infiltrates in both lungs consistent with pneumonia.
- Chest CT scan: multiple infiltrates in both lungs consistent with extensive pneumonia.
  
- Review of chest x-rays and chest CT scan with chest radiologist – no evidence of nodular or linear opacities, no emphysema, no chest lymph node calcifications.

# Pulmonary Physiology

- No pulmonary function testing available
- Arterial blood gas (2 ½ weeks prior to death):  
pH = 7.44, PaCO<sub>2</sub> = 41 mmHg, PaO<sub>2</sub> = 70 mmHg

# Surgical Pathology

- Bronchoscopy with biopsies within a week of patient's death:
  - Inflammation due to pneumonia, but no pathology evidence of Black Lung.

# Death Certificate

- Cause/condition resulting in death:
  - Respiratory failure due to or as a consequence of bacterial pneumonia.

# Final Assessment

- 18 years of coal mine dust exposure at a surface mine
- Death due to severe pneumonia with sepsis
- Hospital record mentions component of pneumoconiosis

## **BUT**

- No imaging abnormalities c/w Black Lung
- Normal arterial blood gas 2 ½ weeks before death
- Biopsy was without findings of Black Lung

# Take home messages

- Black Lung claims are often difficult to win.
- Black Lung Clinics should help identify people who might have successful claims and help them navigate through the DOL benefits system.
- It is important to help miners understand the process and have realistic expectations.

# References

- U.S. DOL Division of Coal Mine Workers' Compensation website:  
[www.dol.gov/owcp/dcmwc](http://www.dol.gov/owcp/dcmwc)
- W.V. Black Lung Clinics Program, Benefits Counseling Handbook (Section 5)
- Appalachian Citizens' Law Center, Inc. (Section 6)
- Office of Workers' Compensation Programs (OWCP), DCMWC Application Process, NCBLRDC Conference, Bristol, VA
- 20 CFR Parts 718 and 725