

# Building Trades National Medical Screening Program (BTMed)

[www.btmed.org](http://www.btmed.org)

**Kim Cranford, RN**

**DOL virtual webinar:**

**Site Exposure Matrix and Former Worker Program**

**August 26, 2020**

# Presentation Outline

- **Topic 1: Overview and Update of BTMed**
- **Topic 2: Early Lung Cancer Detection**
- **Topic 3: Outreach & Research**

# Topic 1: Overview and Update of BTMED

# 100%

## WORKERS **THANK** BTMED

"Thank you for your concerns and effort to bring this matter to the attention it deserves. God bless you and your families."

— WILLIAM MENDEZ, BOILERMAKERS LOCAL 101, ROCKY FLATS

"Great program for working person not familiar with medical terms."

— HANFORD WORKER

"Thank you for protecting the workers."

— GROVER SHEETS, ASBESTOS WORKERS LOCAL 80, PORTSMOUTH GOP

"If it hadn't been for BTMed, I'd be lying in the grave right now. I did my second rescreening and they found a tumor — and it was malignant and aggressive. I wouldn't be here talking to you today if I'd waited. Otherwise somebody else would be driving my car, riding in my boat."

— WALTER CHRISTIAN, LIUNA LOCAL UNION 657, FERNALD

"I DON'T KNOW HOW FAR DOWN THE ROAD I WOULD'VE FOUND OUT ABOUT MY CANCER HAD IT NOT BEEN FOR THAT SCAN."

— LARRY BUCKNER, SHEET METAL WORKERS LOCAL 5, OAK RIDGE



"You'll never get a physical as good as the one you

receive through the BTMed. Not even from your own personal doctor."

— Grady Boyd, Jr., OPCMIA Local 78, Oak Ridge Y-12, K-25, and X-10



# About BTMed

- Started in 1996
- Part of the DOE Former Worker Program (FWP)
- **DOE FWP NATIONAL PROGRAM**
- Provides free medical screening exams to former DOE construction workers



Hanford



# Importance of BTMed

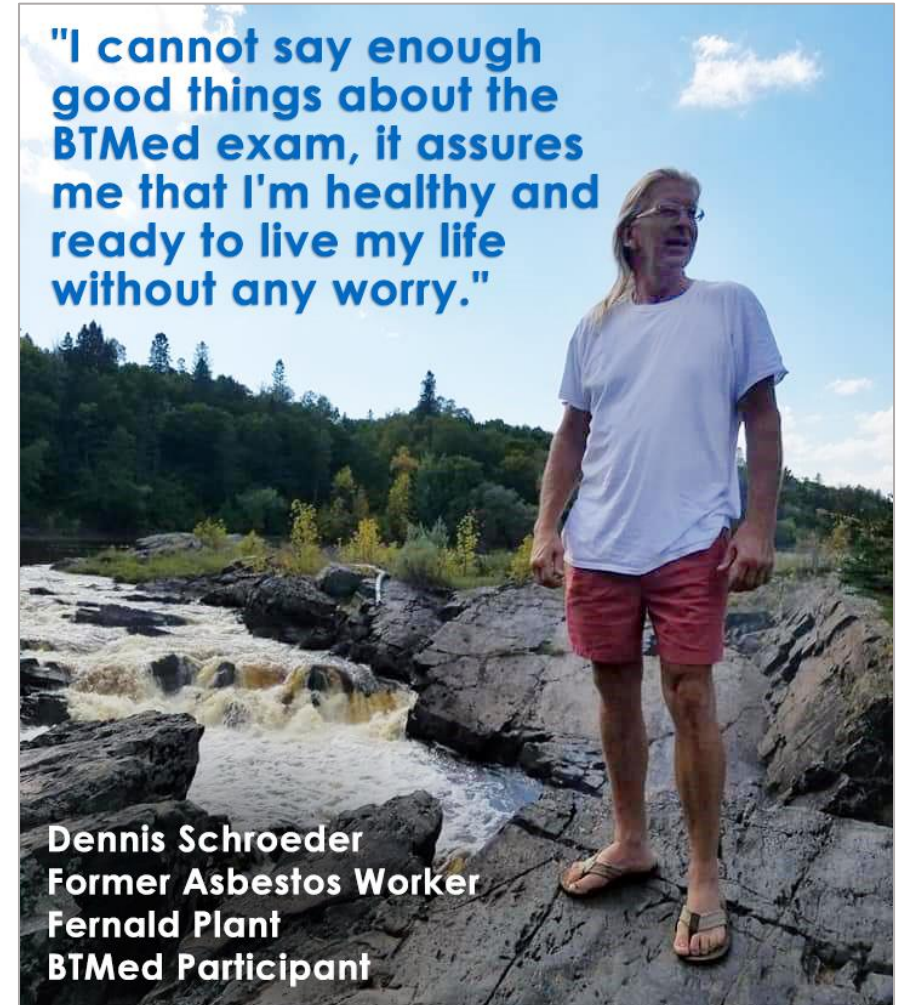
- Workers may have been exposed to hazardous substances or conditions while at DOE sites
- Workers may be at increased risk for occupational illnesses such as cancer and other serious health outcomes



Hauling construction debris to radioactive waste management complex at Idaho National Lab. Photo Courtesy of the Department of Energy.

# Why screening exams are important

- Identifies work-related health conditions at an early, more treatable stage
  - **Screening results**
    - 19.2% abnormal chest x-ray findings
    - 22.6% abnormal pulmonary function test findings
    - 2.2% beryllium sensitivity
    - 64.6% hearing loss
- Contribute to workers' their health and well-being
- BTMed has saved lives



# About BTMed

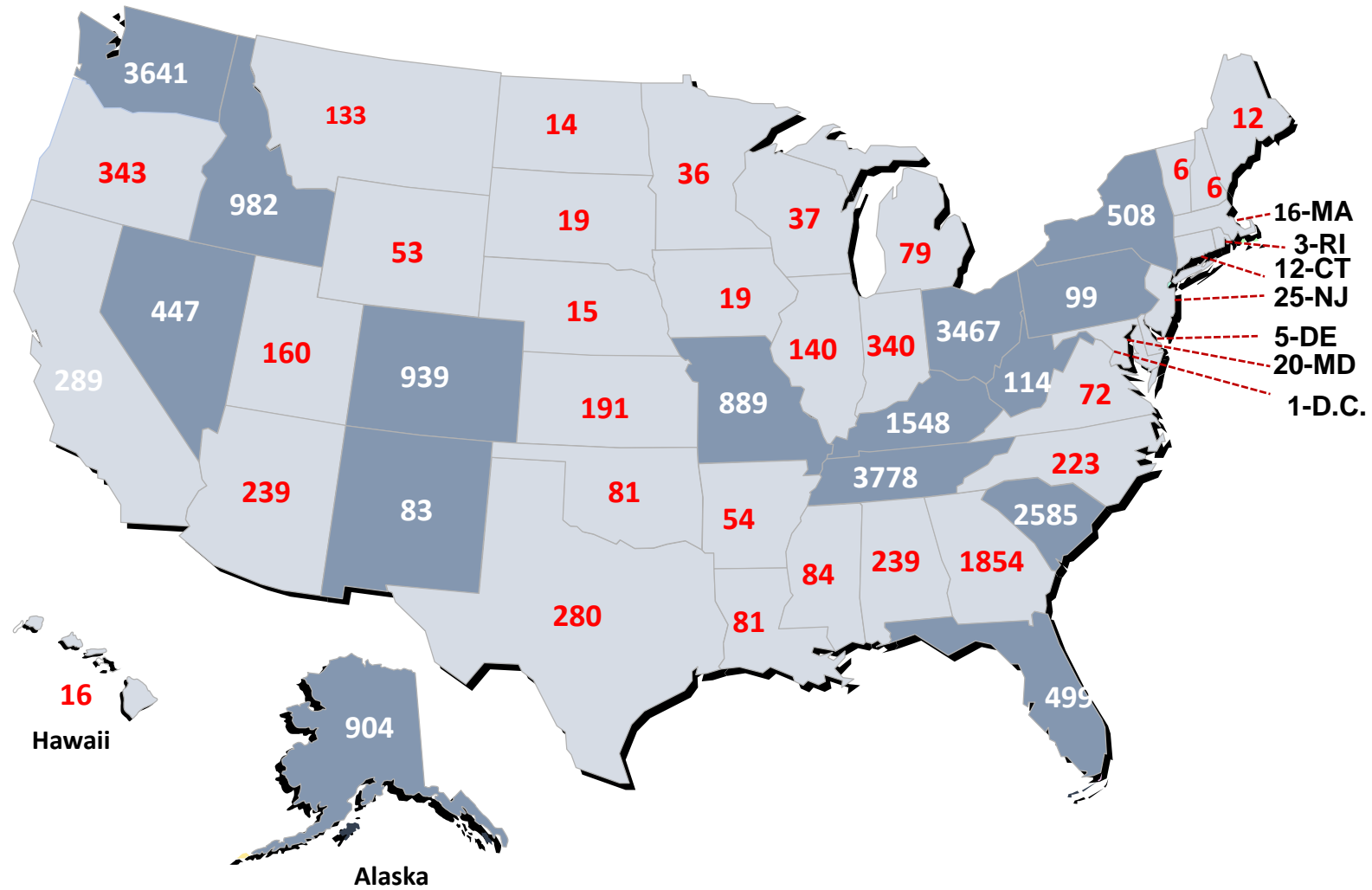
- Offers conventional screenings and ELCD program
- Provided over 40,000 medical screening exams and 6,800 CT scans
- Screens workers from 35 DOE sites
- 225 health clinics across the country



# BTMed Covered DOE Sites



# BTMed Workers Screened by State, 2019

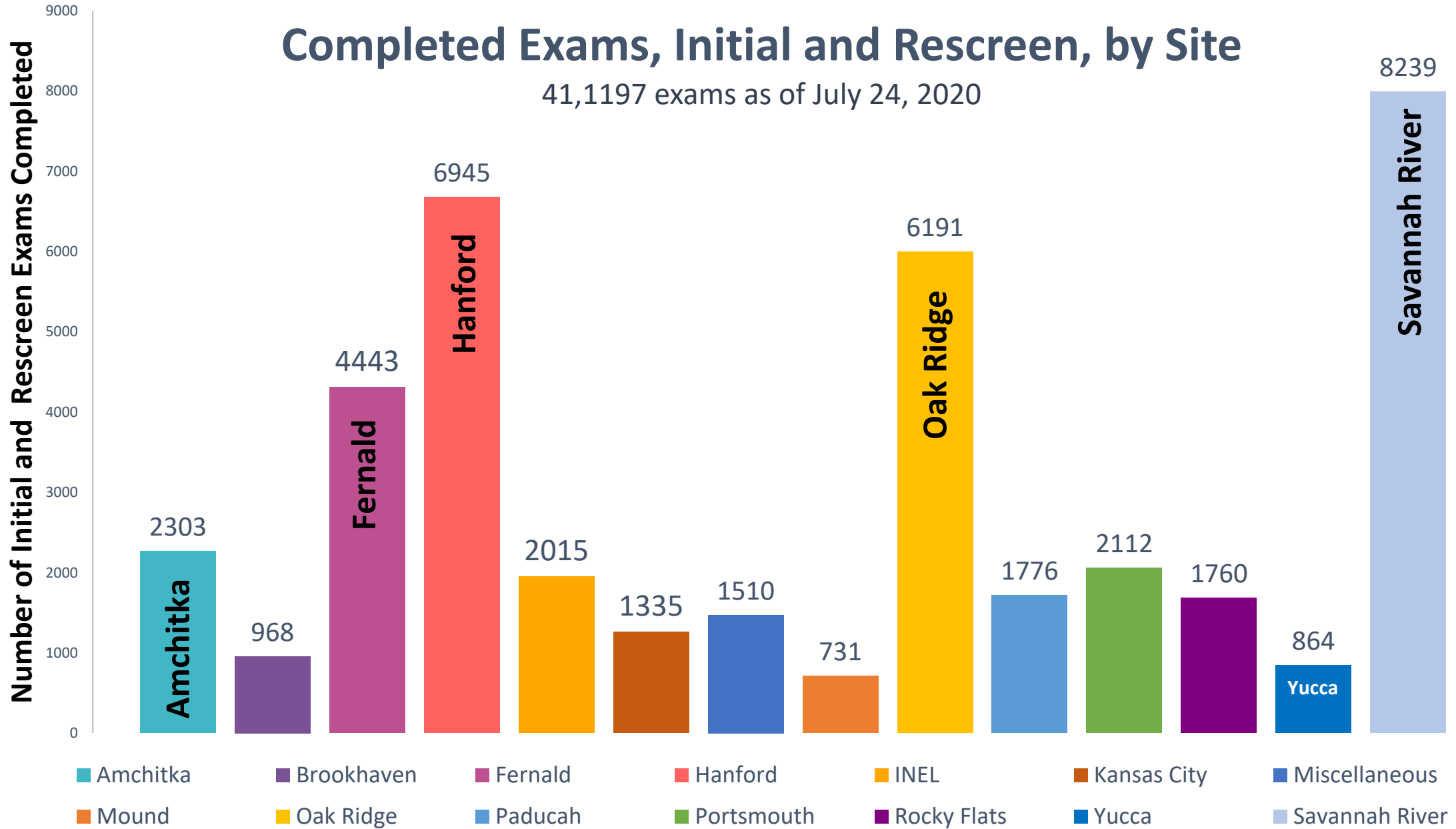


U.S. Only



# Completed Exams, Initial and Rescreen, by Site

41,1197 exams as of July 24, 2020



# How does BTMed work?

- BTMed consists of two steps
  - Work history interview
  - Medical screening exam
- Free rescreen exams are available every three years
- Participation is voluntary, free, and confidential

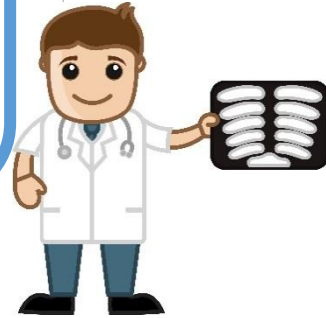


Staff from National Jewish Health coaches BTMed participant performing spirometry



**Purpose of screening exams:**

- Identify individual health impact from work on DOE site



# Screening Exam Components

- Health Questionnaire
- Occupational History
- Comprehensive Exam
- Labs
- Spirometry
- Audiometry (initial)
- Chest X-Ray

# 35 DOE Sites



**BTMed National Medical Screening Program for Former Construction Workers at DOE Atomic Weapons Sites [www.btmed.org](http://www.btmed.org)**

**– 1-800-866-9663**

## Exposures

- Asbestos
- Beryllium
- Cadmium
- Chromium
- Lead
- Mercury
- Noise
- Radiation
- Silica
- Solvents ...and others



## Health Effects

- Asbestosis
- Chronic Beryllium Disease
- COPD
- Dust-related Lung Disease
- Lung Cancer
- Mesothelioma
- Pleural Plaques
- Radiation-Related Cancers
- Silicosis
- Hearing Loss
- ...and others

## Population

- 600,000 former DOE construction workers
- 28,000 enrolled in BTMed surveillance
- Average age 65

## Jobs

- Boilermaker
- Carpenter
- Electrician
- Equipment Operator
- Insulation Worker
- Iron Worker
- Laborer
- Mason
- Painter
- Pipefitter
- Plumber
- Roofer
- Sandblaster
- Steamfitter
- Welder
- ...and others



# Medical Results Letter

- Participants are provided with summary of medical findings and referrals for follow up care
- Includes detailed information and causation language regarding possible work-related conditions
- Helpful when filing a claim under Energy Employee Occupational Illness Compensation Program Act (EEOICPA)

# Topic 2: Early Lung Cancer Detection Program (ELCD)



# Why CT Screening May Help: CTs Detect Cancers That Are Invisible on CXR



# Early Lung Cancer Detection (ELCD) Program

- Started in 2011
- Offers annual screening for lung cancer to workers with increased risk
- Uses low-dose CT scans to detect lung cancer at early, more treatable stage

Robert Irwin, Former Hanford Worker, ELCD Participant

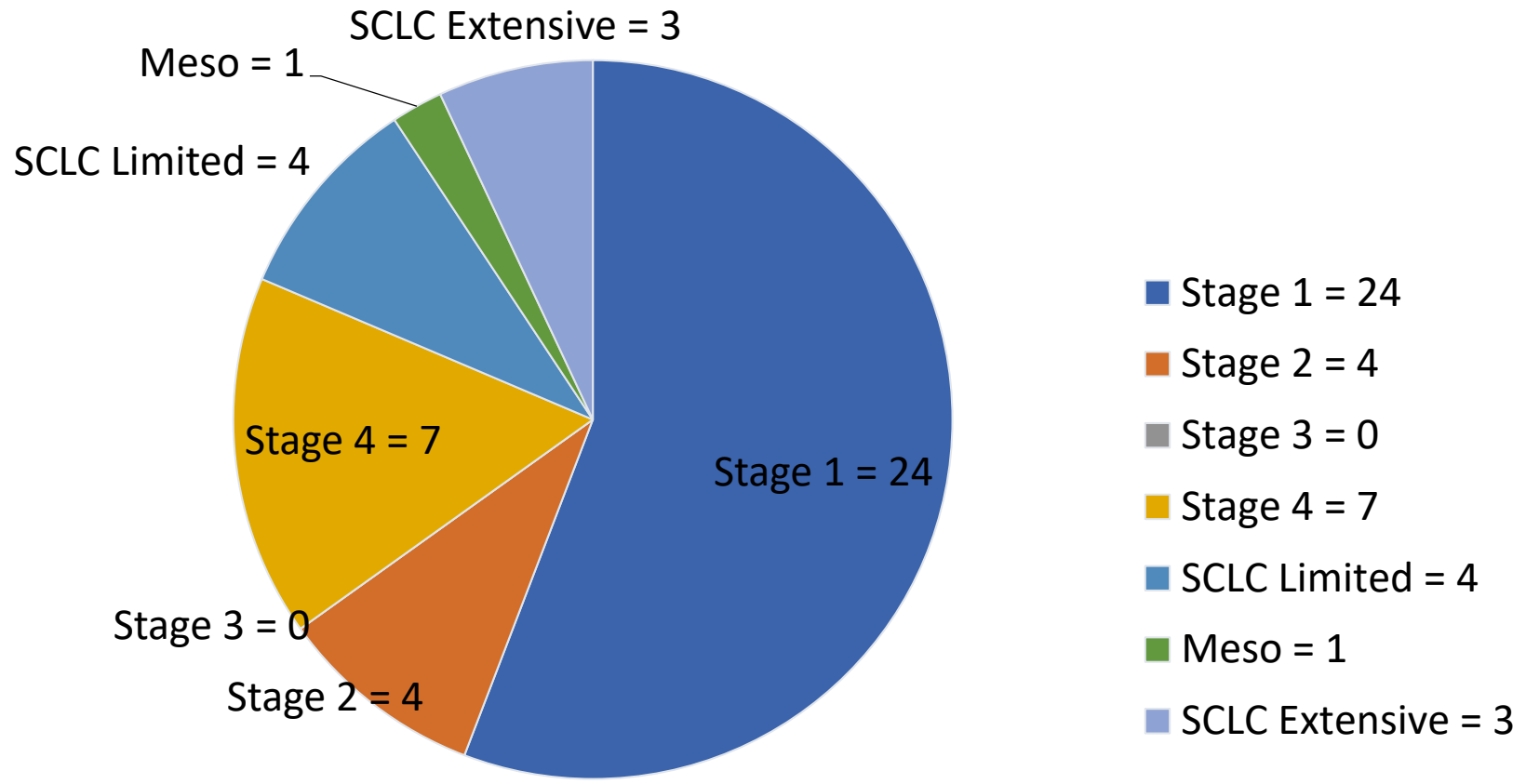


# Scans Completed

# 6,860



# Scanning Results



# CT Eligibility Criteria

- Age 50-79
- Current or former smoker with significant smoking history (20 pack years with no restriction on time since quit)
- Worked construction or DOE work  $\geq$  5 years
- Or,
  - CXR shows asbestosis
  - Pleural plaques or COPD on spirometry



# ELCD Screening Sites





# TOPIC 3: Outreach & Research





# Outreach Activities

- Mailings

- DOE Rosters
- Unions

- Meetings

- Local union
- Retiree meetings
- Advocate meetings
- JOTG meetings
- Senior Fairs
- Community events

- BTMed Website ([btmed.org](http://btmed.org))

- BTMed Facebook  
[facebook.com/BTMed](https://facebook.com/BTMed)

- BTMed Newsletter

- Magazines/Newspaper

# BTMed Promotional Materials



**BTMed news**

SUPPORTED BY NORTH AMERICA'S BUILDING TRADES UNIONS • COORDINATED BY COPPE - THE CENTER FOR CONSTRUCTION RESEARCH TRAINING

Volume 14, Issue 2 Fall 2019 www.btmed.org

## Rescreen helps find cancer in former SRS worker

“Hunt, fish, race,” as Jack Quinley puts it, are what he enjoys doing outside of working as a sheet metal worker in Charleston, South Carolina. You can find him enjoying the great outdoors, at a race track, going out in a boat, or surf fishing. Jack began working at the Savannah River Site in 1991 as an apprentice with the Sheet Metal Workers Local 399. Over the next six years, he worked all over the site - Buildings 105-K, 773-A, 221-F, F and H tank farms. He recalls that he “pretty much got to see it all.” Jack knew he had been exposed to hazardous materials and conditions while working at Savannah River and that those exposures may have affected his health. “Well SRS is a different world than what we call the real world,” he says, having spent his time at the site performing tasks that ranged from operating contaminated equipment, building and dismantling steel structures, and cutting and installing nickel sheet and cadmium-coated metal.

In 2002, Jack received information about BTMed and decided to participate because he had some concerns about his health from exposures on the site. Since the screening was free, it was an easy decision to participate. Even though rescreens are available every three years, Jack waited until 2018 to get a rescreen and he’s glad he came back. BTMed notified him that there was a suspicious finding on his chest x-ray and Jack immediately went to see a specialist. In November 2018, Jack was diagnosed with lung cancer. If it wasn’t for participating in BTMed, the cancer may not have been found as early. “I knew I’d been exposed to radiation but didn’t think it was a lot,”

Jack remembers, “but I’ve heard all the stories of guys getting exposed to a lot of radiation.” Jack’s advice to other workers is “get the exam; it sure wouldn’t hurt them to get checked.”

More than 26,000 workers have been screened through BTMed, helping them stay on top of their health and allowing them to appreciate and take joy in life. Participating in BTMed has given Jack a better understanding of his health. He looks forward to spending more time with his wife, Pamela, and family, keep on doing what he enjoys, and continuing to surf fish, “kick back, and put the poles in wherever and watch the waves roll in.”



FOR MORE INFORMATION, CALL 1-800-866-9663 OR VISIT WWW.BTMED.ORG

## Did you work construction at a Department of Energy nuclear site?

You may be eligible for a **FREE MEDICAL SCREENING EXAM** to test for health conditions that may be work related.




**BUILDING TRADES NATIONAL MEDICAL SCREENING PROGRAM (BTMED)**

**DON'T DELAY, CALL 1-800-866-9663 OR VISIT [www.btmed.org](http://www.btmed.org) NOW!**



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**Posts**

**Building Trades National Medical Screening Program (BTMed)**  
April 15 at 9:43 AM · 🌐

The BTMed Spring 2020 Newsletter is now on our website! This issue features information on COVID-19, Oak Ridge and Paducah staff updates, and more.

Visit [www.btmed.org/.../Publications/Newsletter/BTMed\\_Newsletter\\_Sp...](http://www.btmed.org/.../Publications/Newsletter/BTMed_Newsletter_Sp...) to read the full newsletter.

 Due to the COVID-19 situation, BTMed suspended all medical screening exams to protect the health of our participants. We continue to conduct work history interviews via telephone. Call 1-800-866-9663 or email [btmed@btmed.org](mailto:btmed@btmed.org) to be added to our "call back" list and we will contact you to schedule an exam when it is safe to do so. If you have any questions or concerns, BTMed staff are available and here to help.

COVID-19 is a respiratory illness caused by a virus that has spread across the United States and world. People with COVID-19 have illnesses that range from mild symptoms to severe illness and death. COVID-19 spreads

5.0 5 out of 5 · Based on the opinion of 4 people

**ABOUT BUILDING TRADES NATIONAL MEDICAL SCREENING PROGRAM (BTMED)**

**Our Story**

Since 1996, CPWR - The Center for Construction Research and Training (CPWR) program, BTMed, has offe...



# BTMed Published Medical Findings

- 18 peer reviewed journal articles
- Using data collected from medical screenings
- Research has informed how to improve services and strengthen medical recommendations
- Recent study on lung cancer mortality

Workplace

ORIGINAL RESEARCH

## Lung cancer mortality among construction workers: implications for early detection

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**ABSTRACT**  
**Objectives** This study examined predictors of lung cancer mortality, beyond age and smoking, among construction workers employed at US Department of Energy (DOE) sites to better define eligibility for low-dose CT (LDCT) lung cancer screening.  
**Methods** Predictive models were based on 17 069 workers and 352 lung cancer deaths. Risk factors included age, gender, race/ethnicity, cigarette smoking, years of trade or DOE work, body mass index (BMI), chest X-ray results, spirometry results, respiratory symptoms, beryllium sensitisation and personal history of cancer. Competing risk Cox models were used to obtain HRs and to predict 5-year risks.  
**Results** Factors beyond age and smoking included in the final predictive model were chest X-ray changes, abnormal lung function, chronic obstructive pulmonary disease (COPD), respiratory symptoms, BMI, personal history of cancer and having worked 5 or more years at a DOE site or in construction. Risk-based LDCT eligibility demonstrated improved sensitivity, specificity and positive predictive value compared with current US Preventive Services Task Force guidelines. The risk of lung cancer death from 5 years of work in the construction industry or at a DOE site was comparable with the risk from a personal cancer history, a family history of cancer or a diagnosis of COPD. LDCT eligibility criteria used for DOE construction workers, which includes factors beyond age and smoking, identified 86% of participants who eventually would die from lung cancer compared with 51% based on age and smoking alone.  
**Conclusions** Results support inclusion of risk from occupational exposures and non-malignant respiratory clinical findings in LDCT clinical guidelines.

**INTRODUCTION**  
Construction workers are occupationally exposed to a number of respiratory carcinogens including asbestos, silica, beryllium and welding fumes. Prior studies have demonstrated elevated risk of lung cancer among these workers.<sup>1-3</sup>  
In 2011, the National Lung Screening Trial (NLST) demonstrated a 20% reduction in mortality attributable to three annual screenings using low-dose CT (LDCT).<sup>4</sup> Subsequently, the US Preventive Services Task Force (USPSTF) of the US Public Health Service recommended lung cancer screening, as have other professional organisations, with some (eg, Lung Cancer Alliance) recommending that screening should only be undertaken as a structured programme in centres with considerable expertise in lung cancer care. The USPSTF

**Key messages**  
**What is already known about this subject?**  
▶ The National Lung Screening Trial demonstrated a 20% reduction in mortality attributable to three annual screenings using low-dose CT (LDCT) using eligibility criteria based on age and smoking history.  
**What are the new findings?**  
▶ Lung cancer risk among construction workers can be reasonably predicted based on age and smoking history as well as other risk factors including chest X-rays, spirometry, prior cancer history and duration of construction work.  
**How might this impact on policy or clinical practice in the foreseeable future?**  
▶ Application of additional risk factors beyond age and smoking history including predictive risk models for LDCT eligibility has potential for better targeting of those at high risk, resulting in a higher rate of lung cancer detection at an early stage when treatment is likely to be more effective.

currently recommends LDCT for individuals 55–80 years of age with at least 30 pack-years of smoking and, for former smokers, no more than 15 years since quitting.<sup>5</sup>  
Determining eligibility for lung cancer screening has evolved. The NLST relied on age and smoking history. The most current clinical guideline by the National Comprehensive Cancer Network (NCCN) includes two risk categories: category 1, which is limited to age (55–77 years) and smoking history (current or former smokers with ≥30 pack-years and if former smoker quit within 15 years), and category 2, which includes age (≥50 years), smoking history (≥20 pack-years) and ‘additional risk factors’.<sup>6</sup> Additional risk factors include personal history of cancer or lung disease, family history of cancer, radon exposure and occupational exposure to carcinogens. NCCN guidelines suggest that these additional risk factors may be considered through either fixed eligibility criteria or through use of predictive statistical models.  
The Building Trades National Medical Screening Program (BTMed) is an occupational medical screening programme for construction trades workers previously employed in USA nuclear weapons facilities. BTMed participants are at significantly increased risk of lung cancer.<sup>2,5</sup> The

BMJ

Dement JM, et al. *Occup Environ Med* 2020;77:207–213. doi:10.1136/oemed-2019-106196

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Check for updates

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"Thanks to the help of BTMed, I found out I had cancer. This is a great program, everyone who has worked on a DOE site should be participating."



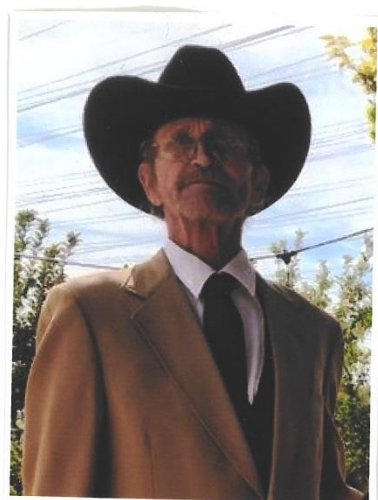
Ralph Daniels  
Former Oak Ridge Worker  
BTMed Participant



"Thank you  
BTMed for  
looking  
after us."



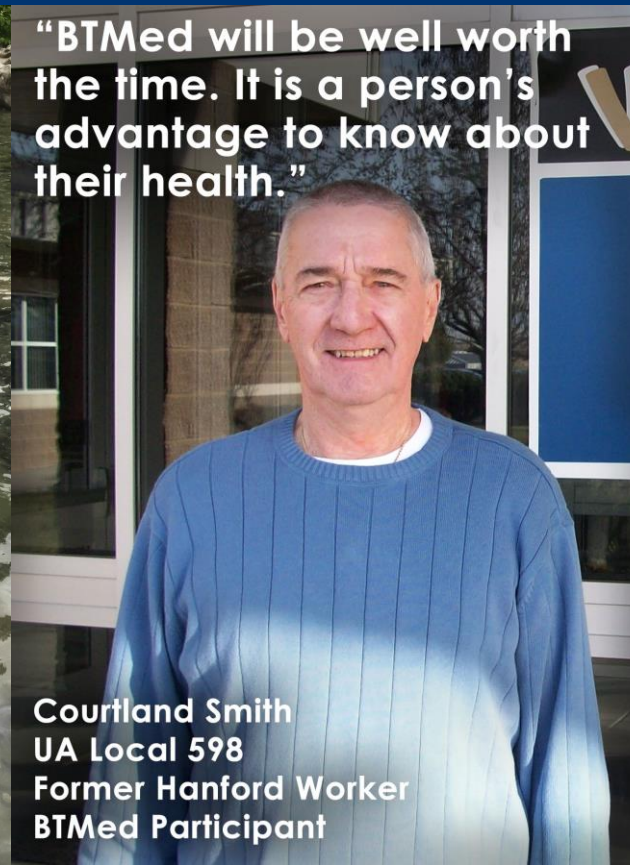
Mark Parsons  
Cement Finisher  
Former Hanford Worker  
BTMed Participant



"BTMed is a good program and  
should keep on being a program  
for the Building Trades."

Sidney Cox  
Carpenter  
Former Idaho National Lab Worker  
BTMed Participant

"BTMed will be well worth  
the time. It is a person's  
advantage to know about  
their health."



Courtland Smith  
UA Local 598  
Former Hanford Worker  
BTMed Participant



Thank you!

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Questions?