

# Firefighters and Their Health

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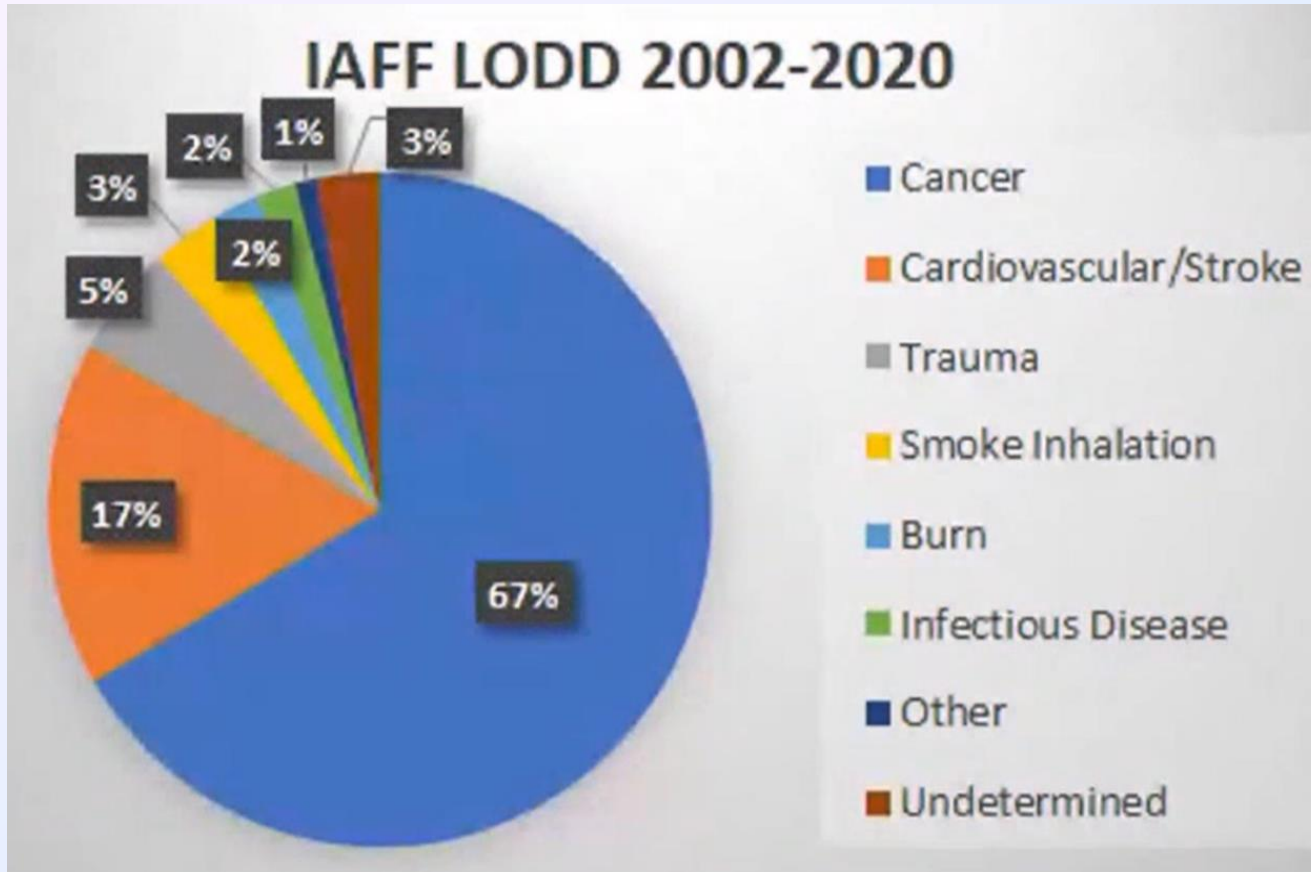


# Firefighter Exposure to Smoke

- Fuel
  - Gaseous and particulate emissions to the atmosphere
  - Deposition of atmospheric emissions
  - Contamination from fire debris/residues
- Fire Scenario (fire conditions)
  - Use of Personal Protection Equipment
  - Decontamination practices
  - Hygiene facilities and practices



# Firefighters and their health



International Association of Firefighters

**2018:** President Donald Trump signed legislation requiring to set up a registry of firefighters that will track links between their workplace exposures and cancer.

# Firefighters and their health

**2010:** International Agency for Research on Cancer (IARC), World Health Organisation (WHO) has classified firefighting as an occupation as Group 2B 'possibly carcinogenic to humans'

International Agency for Research on Cancer



## IARC MONOGRAPHS ON THE IDENTIFICATION OF CARCINOGENIC HAZARDS TO HUMANS

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15 March 2021

### Meeting 132 “Occupational Exposure as a Firefighter” is announced

The International Agency for Research on Cancer (IARC) is pleased to announce *IARC Monographs* Meeting 132: Occupational Exposure as a Firefighter, which will be held on 7–14 June 2022.

For details, please see [Upcoming Meetings](#).



**PAVEL POC MEP**

Vice Chair of the MEPs Against Cancer Group

*in Association with*

**FIRE SAFE EUROPE**

*presents:*

# FIREFIGHTERS AT HIGH RISK OF GETTING CANCER



**28TH**  
SEPTEMBER 2017

from **12:30**  
to **14:30**

**PLACE - ASP A3H1**

EUROPEAN PARLIAMENT, BRUSSELS

## AGENDA

- 12:30 - Opening speech by MEP Pavel Poc
- 12:35 - UK study: Anna Stec
- 12:55 - Finnish study: Eero Pukkala
- 13:15 - Czech study: Ondřej Májek / Ladislav Dušek
- 13:30 - Smoke in the frontline: Firefighter testimony
- 13:45 - Q&A Session
- 14:25 - Closing remarks and conclusions



## Fire Brigades Union -UCLan project

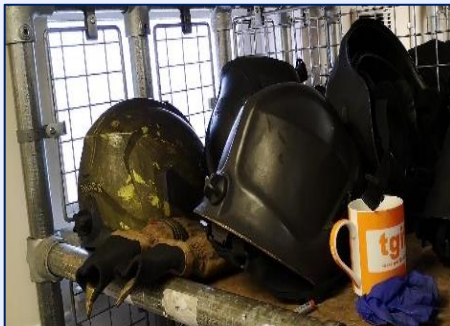
**To identify association (if any) between fire toxicants exposures and the increased occurrence of cancers and diseases among firefighters.**

- *...so we can offer preventative health screening, education and support that is specifically designed to protect firefighter's health.....*

# Gathering Evidence

- **Literature review** on the decontamination methods
- **Review of Decontamination Policies** in the UK's Fire and Rescue Stations
- **Indoor testing** (18 Fire and Rescue Stations)
- 3-month **survey** (10 659 responses)

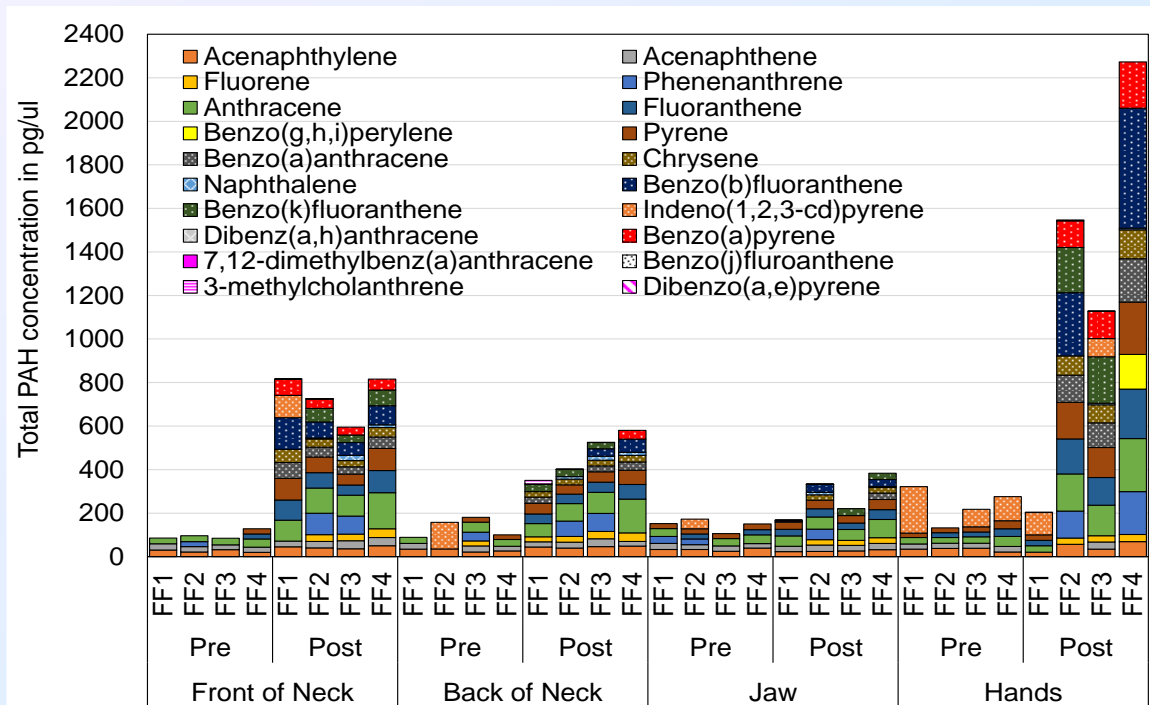






# Firefighters and Exposure to Contaminants

- Approximately 160 fire fighters: skin (face, neck, wrist, hands)
- Fire fighters clothing: SCBA masks, gloves, hood, zipflap
- Fire fighters offices, clothing rooms, fire engines bays and fire engines
- Approximately 600 samples (within 2.5 week) for the analysis of semi- and volatile organic compounds

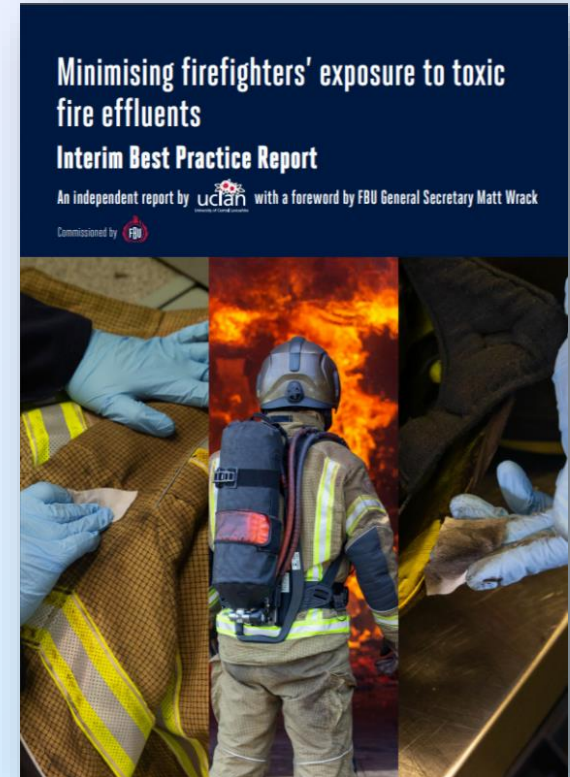


# The UK Firefighter Contamination Survey

- Run for 3 months in 2020
- 64 questions
- Open to serving firefighters
- 10, 649 participants (~24% of UK's firefighters)

## Covered:

- Demographics
- PPE/workplace contamination
- Health
- Culture and awareness





# PPE and Workplace Contamination



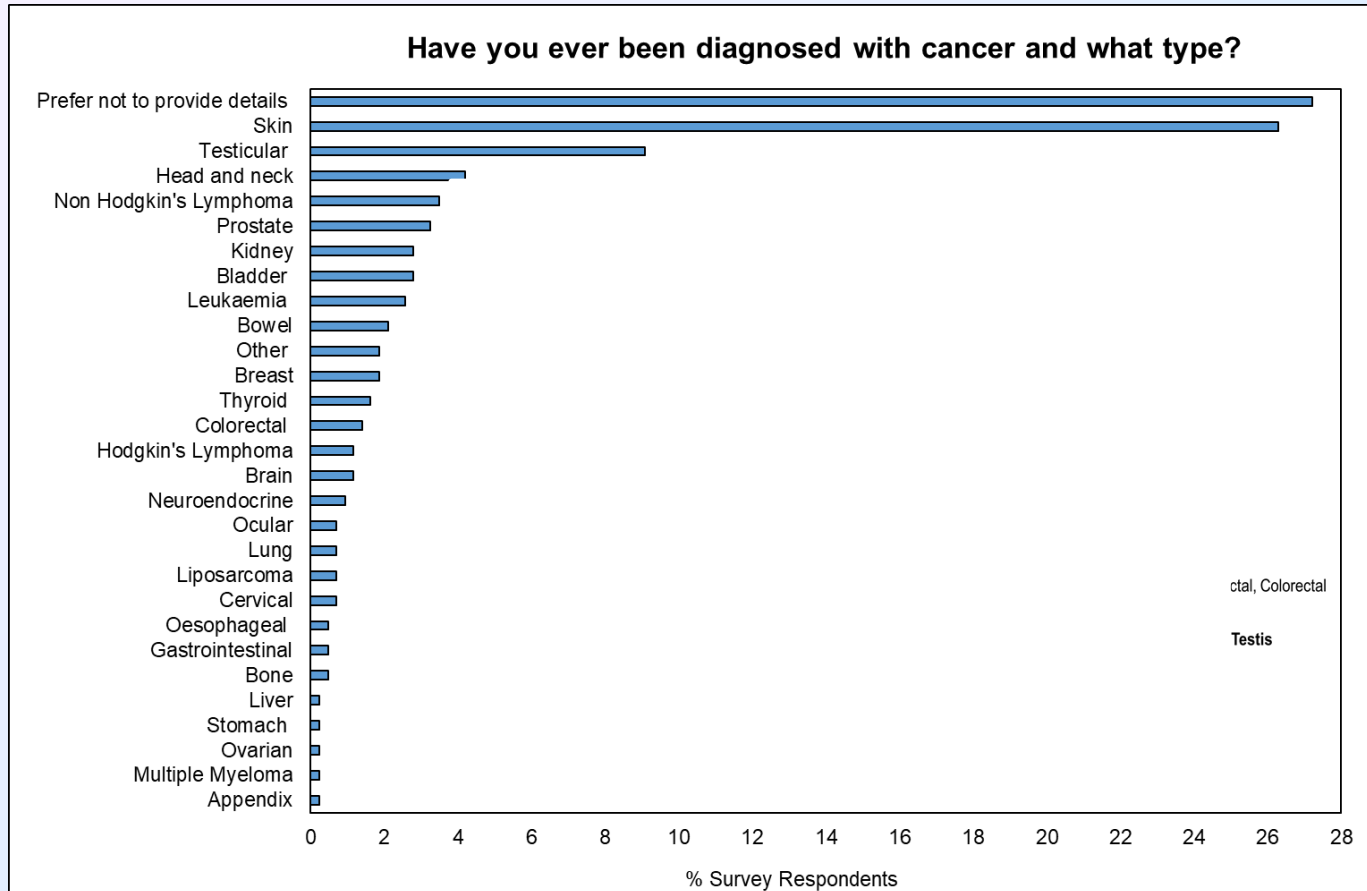
- **84%** firefighters often/sometimes attend fires without RPE
- **82%** eat while in PPE
- **63%** eat with sooty hands
- **Only 58%** change workwear on return to the station
- 





# Cancer Incidence

**Over 4% of UK serving firefighters who responded to the survey have already been diagnosed with cancer.**



**98% of UK serving firefighters who responded indicated they do not smoke.**

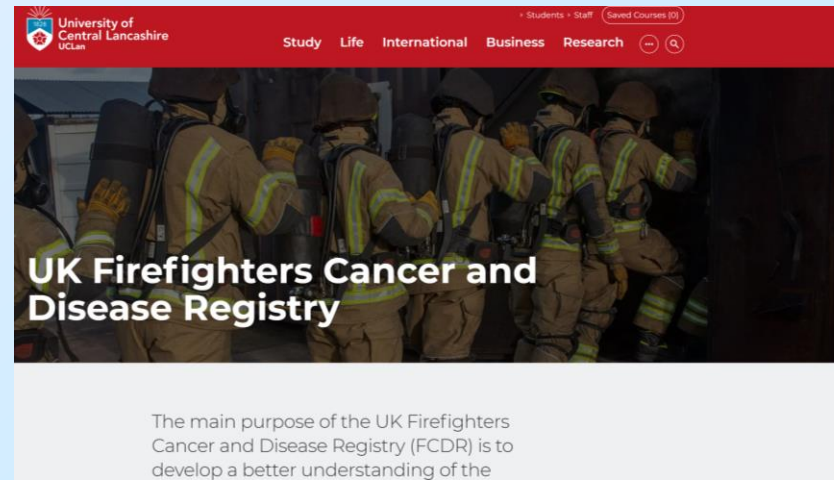
# Firefighters Occupational Cancer

- Linking firefighters toxic fire effluents exposures with their occupation.
- Estimating likelihood of developing cancers in the UK firefighters.
- Developing preventive health screening method for the firefighters.

## This will be done by:

- Firefighters Cancer and Disease Registry
- Clinical markers
- Fire effluents and their metabolites
- Epigenetic Methylation
- Galleri test

[www.uclan.ac.uk/FCDR](http://www.uclan.ac.uk/FCDR)



# Conclusions

- **Fire fighters deserve the best preventative medical care, education, and support to reduce the risk of cancer.**
  - Better decontamination policies/standardisation needed
  - Training and Awareness
  - Preventative health screening

**Percival Pott:** First to demonstrate scrotal cancer caused by soot  
**First preventative Legislation!**





# Thank you for your attention

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