



**Testimony Before the House Committee on Business and Labor**  
February 2, 2022

**From: Hasina Wittenberg, Special Districts Association of Oregon**  
**Re: Opposition to HB 4113**

Members of the committee, my name is Hasina Wittenberg and I appear before you today on behalf of the Special Districts Association of Oregon in opposition of LC 96. In addition, with me today is Andy Graham a practicing attorney with Cummins Goodman.

The Special Districts Association of Oregon (SDAO) and the Special Districts Insurance Services (SDIS). SDIS was formed in the mid-1980s in response to an extremely adverse public liability insurance market. Currently, SDAO has approximately 956 members statewide and approximately 60% of those districts obtain workers' compensation coverage from the SDIS insurance pool; nearly 200 rural fire protection districts participate in our workers compensation plan. Rural fire protection districts are the largest type of special district that belongs to our association (approximately 253 of the 956 special districts).

The Oregon Fire District Directors Association's membership represents the elected officials (approximately 800 fire district director board members) of 160 rural fire protection districts.

**WORKERS' COMPENSATION: BENEFITS FOR INJURIES OR DISEASES CAUSED BY WORK**

---

The workers' compensation system is intended to deliver medical and disability benefits to Oregon workers who are either injured on the job or develop some sort of disease as a result of their employment exposures. Entitlement to benefits is tied to work having caused the injury or disease. For injuries, the basic standard for a compensable claim is that work must have been a material contributing cause of the disability or need for treatment. For occupational diseases—conditions that arise over time—the basic rule is that work must have been the major contributing cause, meaning more than 50% of the cause, of the disease itself. In general, workers have the burden of proof to establish the causal relationship between work and the claimed condition.

**PRESUMPTIONS: SHIFTING THE BURDEN OF PROOF**

---

Over the years, the general rules outlined above have been changed in limited circumstances involving occupational disease claims. In particular, over the years, the legislature has amended the Oregon Workers' Compensation Law several times to create presumptions of compensability for certain conditions for specific classes of workers. A presumption acts to place the burden of proof onto the employer to establish the lack of a causal relationship between the individual's work and the claimed condition. At the same time, these presumption laws have also radically altered the standard of compensability, as well as the level of proof required. There are a few different standards at play. **But, generally speaking, if employers believe a presumptively compensable condition should not be accepted as work-related, they**

**have to establish to a high degree of probability (through “clear and convincing evidence”) either that work was not a contributor at all (for some claims) or that work was, at most, an insignificant factor.**

The current law establishes three types of presumptions: The first presumption, established originally in the 1960s, is for diseases of the lungs or respiratory tract, hypertension, and “cardiovascular-renal disease.” This is found in ORS 656.802(4). The second presumption, found in ORS 656.802(5), was established in 2009; this presumption is for a variety of specifically enumerated cancers. The third presumption, established in 2019, is for acute stress disorder and PTSD. This presumption is found in ORS 656.802(7). All three presumptions apply to the claims of qualifying firefighters, though the qualifying standards for each differ slightly.

#### **THE CANCER PRESUMPTION: HISTORICAL BACKGROUND**

In 2007, the Oregon Legislature considered SB 560 which would have established presumptive compensability of any firefighter’s claim for any one or more of numerous cancers. This bill was purportedly based on the report of an epidemiological “meta-analysis” prepared by LeMasters et. al. in the Journal of Occupational and Environmental Medicine in November 2006 (the LeMasters report). Though the proponents of SB 560 argued that the LeMasters report supported the inference of a causal relationship between firefighting work and cancer in general, the report itself does not in fact support such an inference. In fact, the report supports an inference of causation for only a handful of cancers.

Ultimately, SB 560 failed to pass in 2007. Stakeholders then came together between legislative sessions, and a compromise bill—what is now ORS 656.802(5)—was enacted in 2009. That compromise, **ORS 656.802(5), establishes presumptive compensability for the following cancers: brain cancer, colon cancer, stomach cancer, testicular cancer, prostate cancer, multiple myeloma, non-Hodgkin’s lymphoma, cancer of the throat or mouth, rectal cancer, breast cancer, and leukemia.** The presumption only applies for paid firefighters after five years of service, and the presumption ceases to apply seven years after the firefighter’s last employment as a paid firefighter. There is also an age limitation with respect to prostate cancer diagnosis. In general, these cancer claims are compensable unless the employer can show through clear and convincing evidence that the cancer was not caused in material part by the firefighter’s work. (There is also a separate defense applicable in cases where employers can establish that the worker’s cancer was caused in major part by tobacco use.)

**In practice, based on the way the law has been interpreted, establishing that a cancer was not caused in material part by work has been nearly impossible in all but the most unusual cases.** In a Workers’ Compensation Board case, *Robert B. Ritchey, Jr.*, 69 Van Natta 325 (2017), the employer put on evidence that firefighting was “at most, an ‘extremely minor contributor,’” and that ““scientifically it is extraordinarily unlikely that [the worker’s] occupation [as firefighter] contributed to the development of [his] testicular cancer.”” This evidence was un rebutted. Nevertheless, the Board found that even “an extremely minor contributor” met the “material part” threshold. It thus overturned the employer’s denial of that testicular cancer claim. The Board has gone on to cite back to this *Ritchey* case time and again in striking down

denials of cancer claims that have, at best, extremely tenuous links to work. The reality is that although the intent in 2009 was to establish a rebuttable presumption of compensability, the practical effect of the 2009 law has been to create a presumption that is essentially irrebuttable.

#### **WHAT IS WRONG WITH A FUNCTIONALLY IRREBUTTABLE PRESUMPTION IN WORKERS' COMPENSATION?**

---

From the earliest times, the purpose of workers' compensation laws has been to compensate workers for on-the-job injuries and diseases. The system is intended to give workers "regardless of fault, sure, prompt and complete medical treatment . . . and fair, adequate and reasonable income benefits" for "those injuries [or diseases] that bear a sufficient relationship to employment to merit incorporation of their costs into the stream of commerce." ORS 656.012(1)(c) & (2)(a). The system is not intended to socialize costs for non-occupational conditions. Yet that is precisely what happens for irrebuttable presumptions. Workers receive benefits for conditions that are not meaningfully work related, and employers bear the costs of conditions that, in reality, were not caused by work. In short, functionally irrebuttable presumptions are at odds with the entire purpose of workers' compensation.

#### **LC 96'S PRESUMPTION APPLIES TO CANCERS THAT SCIENCE DOES NOT SUPPORT A WORK RELATIONSHIP**

---

LC 96 would add bladder cancer and gynecological cancers (which would include ovarian cancer, fallopian tube cancers, uterine cancer, cervical cancer, and vulvar cancer, perhaps among others) to the list of presumptively compensable cancers under ORS 656.802(5). **The best available peer-reviewed science does not causally link any of the cancers under consideration to employment as a firefighter.** For that reason alone, these cancers should not be given presumptive compensability in the workers' compensation system.

For bladder cancer, the science has not materially changed since the 2006 LeMasters study that was used in the 2007/2009 sessions to support the initial passage of the firefighters' cancer presumption. The authors of the LeMasters study concluded then that it was "unlikely" that employment as a firefighter increased the occurrence of bladder cancer. That has not changed. And even if one were to assume that a modest 10% or so greater incidence of bladder cancer among studied firefighters (see Dr. Noel Weiss testimony attached) is indicative of causation, all that would mean is that one in ten firefighters' bladder cancers would be causally related to their firefighting work. Nine of ten would not. **Nine out of ten times the presumption would be wrong.** With a presumption that is functionally irrebuttable, nine out of ten times it would afford compensation to a worker for whom work played no meaningful role in the development of the disease. This is simply not what workers' compensation is supposed to do.

The situation is very similar for gynecological cancers. Although they have not been well studied, **the studies that exist actually show a lower incidence of such cancers among female firefighters than among females in the general population.** There is zero scientific basis to infer any sort of causal connection. For gynecological cancers, the presumption would effectively be wrong 100% of the time. The sole function of a presumption for gynecological cancers would thus be socialization of costs for non-occupational conditions. Again, this is just not what the system is supposed to be for.

## CONCLUSION

---

There is no question but that firefighters provide invaluable services to their communities. Under the workers' compensation law, they should be compensated for injuries or diseases they experience due to their work. But the workers' compensation law should not be a vehicle to provide additional benefits to any class of worker for conditions that are not established to be work related. That is not the function or purpose of the workers' compensation system. **Because LC 96 would add bladder and gynecological cancers to the list of presumptively compensable conditions for which firefighters would receive workers' compensation benefits without there being any good evidence causally linking any of the cancers to firefighting work, Special Districts Association of Oregon must respectfully oppose passage of this bill.**

Attachment: Exhibit-Report of Dr. Noel Weiss, Occurrence of Bladder/Gynecologic Cancer FF

Report of Noel S. Weiss, M.D., Dr.P.H.

Occurrence of Bladder and Gynecologic Cancer in Firefighters

2022

I am Noel S. Weiss. I obtained an M.D. degree from Stanford University in 1967 and a Dr.P.H. degree (Epidemiology and Biostatistics) from the Harvard School of Public Health in 1971. Since 1973, I have been a faculty member in the Department of Epidemiology, School of Public Health, University of Washington, and also at the nearby Fred Hutchinson Cancer Research Center. At the present time, I hold the rank of Emeritus Professor. I have authored or co-authored over 700 articles in medical journals. Approximately two-thirds of them have been in the area of cancer. I served as Chair of the Department of Epidemiology for nine years and for 25 years was Principal Investigator of a Training Grant in Cancer Epidemiology and Biostatistics from the National Cancer Institute. During the course of my career, I have received numerous research grants from the American Cancer Society and the National Institutes of Health. One of these was the Outstanding Investigator Award from the National Cancer Institute, which I received in 1985 and had renewed in 1992.

I have been asked to review the medical literature to form an opinion regarding the relation of firefighting to the occurrence of bladder and gynecologic cancers. By means of a combination of a Medline search and the follow-up of references cited by the key studies that have been conducted, I attempted as systematically as possible to examine the results of research that has sought to evaluate the potential carcinogenic effect of this type of occupational exposure. It is my opinion, based on review of the body of peer-reviewed epidemiological research available, including the most up-to-date studies, that a causal connection does not exist between firefighting and either bladder or gynecologic cancers.

### What is epidemiology?

If you have worked as a firefighter, are your chances of developing bladder cancer increased? This is the sort of question the study of epidemiology seeks to answer. In trying to answer this question, it's not much help to know of someone who served as a firefighter for an extended period and who was diagnosed with cancer of the bladder. We can never know from just one person's experience whether there is a relation between the two. Bladder cancer occurs in people who have never fought fires, and the large majority of firefighters never develop such a tumor. In individual instances, we cannot distinguish cause from coincidence.

Epidemiologic research seeks to determine the underlying reasons for the occurrence of disease and injury; it seeks to distinguish between cause and coincidence. Early in its history, epidemiology concentrated on the transmission of infectious diseases, but subsequently it has also made contributions toward understanding the causes of other forms of illness. For example, epidemiologists did studies that documented the sharply increased incidence of lung cancer among persons who smoked cigarettes, an observation that was key in being able to allow us to conclude that cigarette smoking is a cause of lung cancer. Similarly, epidemiologic studies identified a large increase in the risk of pleural mesothelioma (a tumor of the lining of the lung) in persons heavily

exposed to asbestos on the job, and in the risk of liver cancer among persons who chronically have abused alcohol.

Many questions about the causes of ill health are addressed by studying people who share a common experience (such as employment as a firefighter) and comparing their later health with the health of those who did not have that experience. These are termed “cohort studies”. If a difference in the occurrence of a given disease emerges between the two groups, we say that an “association” between exposure and that disease is present.

The interpretation of such an association requires, at the outset, a consideration of the role of chance as a potential explanation. All of us allow for the possibility of chance in other contexts. For example, if in flipping a coin we get “heads” four consecutive times, we wouldn’t conclude the coin had no “tail” side, but rather that it could have been chance that led to seeing none of the four flips resulting in tails rather than the expected number (i.e. two). With the use of statistics, we can gauge the role of chance in epidemiologic studies—we are able to obtain the range of results within which the true size of an exposure-disease association is likely to lie.

### Association versus causation

Considering all relevant studies, if the difference in the occurrence of a given form of cancer between firefighters and the general population is large enough so that chance alone likely does not explain that difference, epidemiologists go on to consider whether the identified association reflects a causal link, or if other variables (termed “confounding” variables) or study design issues (leading to hidden biases) may be at play. Epidemiological researchers consider answers to the following questions to help infer whether or not a causal connection exists.

- Is the association present in most or all studies of the question? While there can be reasons for a causal association to be present in only some circumstances, a causal inference is greatly strengthened when it is observed consistently.
- Is the association strongest when it might be expected to be strongest, for example in persons for whom the level of exposure has been highest or most prolonged?
- To what extent have potential confounding variables been measured and adjusted for? How well have they been measured?
- How large is the difference in incidence between exposed and non-exposed individuals? The larger the difference, the more likely it is that the difference has not been created by the presence of one or more confounding characteristics that have not been measured (or have been poorly measured) in the studies.
- Does it make sense biologically that there ought to be a causal influence of the exposure on the particular disease?

There are instances in which the answers to all of the above questions are “yes,” as in the association between cigarette smoking and the occurrence of lung cancer. In those

situations, a causal inference may be readily made and agreed upon. And there are other instances in which the answers all are “no”—the association is weak, inconsistent across studies, potentially confounded by an unmeasured variable, and biologically implausible. In those scenarios, it is widely concluded that no causal connection exists. Finally, some answers may be “yes,” some “no,” others “maybe,” and there is room for disagreement regarding a causal interpretation. In those instances, a consensus may not be reachable.

### Firefighting and the occurrence of cancer – what information is available?

There have been several dozen relevant cohort studies conducted in different parts of the world, each of which had the same basic design: firefighters were identified using employment records going back some period of time, and these individuals’ vital status and/or cancer incidence was monitored. The investigators sought to enumerate the incidence of and/or deaths from different forms of cancer and to compare the observed number of cases to that expected based on rates in the underlying population. (Other study designs have occasionally been employed, e.g. proportional mortality studies and case-control studies. For evaluating the possible impact of firefighting on cancer risk these designs are not as strong as cohort studies and, given the abundance of available cohort studies, they will not be considered here.)

In interpreting the collective results of the cohort studies, epidemiologists often look at “meta-analyses” that consider data from multiple individual studies. Although these meta-analyses are useful, their conclusions may be skewed because some of the underlying studies have not reported on a particular cancer in question even though relevant data on that cancer had been collected. This represents a form of “publication bias.” Each of the studies that did not display results for the cancer in question would have obtained the relevant data, just as they did for the cancer sites for which they did choose to present results. Typically, the reason for failing to display results for an individual form of cancer is a small number of observed cases and/or the absence of any association in the collected data. The effect of the absence of reporting results on the analysis of the collection of cohort studies from which data HAVE been presented is that the meta-analyses end up overestimating the size of any true association (or lack thereof).

### Firefighting and the occurrence of bladder cancer

Several dozen cohort studies have been conducted, some of which consider cancer incidence and some of which consider cancer mortality. Reviews of the results of these studies have been summarized in a meta-analysis as early as 2006 (1) and as recently as 2020 (2). Each of these estimated firefighters to have about a 20% increase in bladder cancer incidence relative to that in the general population. The more recent review also estimated a 44% increase in bladder cancer mortality, but because of the



small number of fatal cases this result was statistically compatible with there being no true difference.

Important in the interpretation of the above results is the fact that the estimates were missing data on bladder occurrence in about a third of the cohort studies because the investigators of those additional studies did not provide data on bladder cancer in their published results. The omitted studies would have tended not to have found a positive association (see above), so the suggestion of a 20% increase is likely to be an overestimate of the true association. The results of the two largest and most comprehensive studies—of firefighters in five Nordic countries(3) and three large US cities (4)—suggest but a 10% increase in bladder cancer incidence in firefighters, and no increase (5) in bladder cancer mortality.

How do we interpret a 10% increase in bladder cancer occurrence in studies of this type? Very cautiously. The problem is that there are many factors that bear on the occurrence of bladder cancer: some are known (e.g. a history of cigarette smoking), many are not. The firefighter cohort studies had no information regarding these other factors, and a difference between firefighters and other members of each comparison population in terms of smoking history, occupational history, etc. could lead to a distortion (either up or down) of the figures for relative incidence and/or mortality. For this reason, it is extremely unusual for epidemiologists to draw an inference of cause and effect when there is only a 10% difference in disease incidence between persons with and without a given exposure. Of particular relevance here, following their 2006 meta-analysis which identified a 20% increase in the occurrence of bladder cancer among firefighters (1), the authors (from the National Institute of Occupational Safety and Health) concluded that it was “unlikely” that employment as a firefighter increased the occurrence of this disease.

In summary, in my opinion there is not a sufficient basis at present for concluding that firefighters are at an increased risk of bladder cancer.

Here is an additional point, with implications relative to consideration of a presumption of compensability for bladder cancer in firefighters. If the approximately 10% higher incidence in firefighters does in truth represent a causal influence of their work environment, this data would mean that firefighting would have played a contributing role in only 1 of 10 firefighter bladder cancers. That is, 9 out of 10 firefighters with bladder cancer would have developed the disease regardless of their occupation. Firefighting exposures would have contributed to only one of the 10. There would be no means of determining which one of the 10 firefighters should be entitled to workers' compensation benefits. Nine out of 10 times, a presumption of causation would be wrong, and therefore 90% of the claims receiving benefits under a presumption would be for conditions that were not in fact work related.

## Firefighting and the occurrence of gynecologic cancer

The known causes of the various gynecologic cancers differ from one organ to the other. Most endometrial cancers are believed to arise from a hormonal imbalance, while vulvar and cervical cancers require an infection with the human papilloma virus. The origins of fallopian tube and ovarian cancers continue to be not well understood. It is implausible that exposures encountered while firefighting could have a bearing on ALL types of gynecologic cancer.

The data available to date are limited, but they do not support the hypothesis that female firefighters have an increased risk of any form of gynecologic cancer. In Australia, both paid and volunteer firefighters had about a 20% decrease in the incidence of gynecologic cancer as a whole relative to other Australian women, and specifically a 50% decrease in cervical cancer incidence (6). Among female firefighters in Florida (7), the incidence of cervical cancer also was but half of that among women in general. It seems unlikely that women who have worked as firefighters have some genuine protection against cervical cancer—the difference in occurrence could be explained by the presence of other risk factors for the disease that may differ between firefighters and other women. But certainly the data provide no basis for believing that female fighters are at any increased risk of cervical or other forms of gynecologic cancer.

## References

1. LeMasters GK, et al. Cancer risk among firefighters: a review and meta-analysis of 32 studies. *J Occup Environ Med* 2006;48:1189-202.
2. Casjens S, et. al. Cancer risks of firefighters. *Int Arch Occ Environ Med* 2020;93:839-52.
3. Pukkala E et. al. Cancer incidence among firefighters. *Occup Environ Med* 2014;71:398-404.
4. Daniels RD, et. al. Mortality and cancer incidence in a pooled cohort of US firefighters. *Occup Environ Med* 2014;71:388-97.
5. Pinkerton L, et. al. Mortality in a cohort of US firefighters in San Francisco, Chicago, and Philadelphia: an update. *Occup Environ Med* 2020;77:84-93.
6. Glass DC, et. al. Mortality and cancer incidence among female Australian firefighters. *Occup Environ Med* 2019;76:215-21.
7. Lee DJ, et.al. Cancer risk among career male and female Florida firefighters. *Am J Ind Med* 2020;63:285-99.