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### **► To cite this version:**

Emilie Counil, Emmanuel Henry, Walaa Ismail, Danièle Luce, Christophe Paris. Linking the assessment of the burden of work-related cancer to health inequities research: Past, present and future. ISEE2019 international conference "On airs, waters, places", Aug 2019, Utrecht, Netherlands. 2019. <hal-02435332>

**HAL Id: hal-02435332**

**<https://hal.science/hal-02435332v1>**

Submitted on 10 Jan 2020

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# Linking the Assessment of the Burden of Work-Related Cancer to Health Inequities Research: Past, Present and Future

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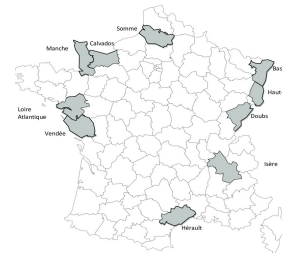
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**KEY MESSAGES:** We propose to further the discipline's reflexivity by changing the focus, scope and metrics in order to assess the burden of work-related cancer in a way that is more meaningful to the most impacted workers. We empirically illustrate some of these issues based on the secondary analysis of a large case-control study suggesting that BCWs contribute 95% of the general population work-related burden of lung cancer (combination of 3 occupational carcinogens) among French men.

## Background

Population attributable fractions (PAFs) are increasingly used for discussing cancer prevention priorities. Our aims are, first, to gather published estimates of cancer attributed to causal agents in the workplace over the last decades (past); second, to analyze them from the perspective of their potential effects on population health inequalities research (present); and third, to explore ways by which population health metrics could take occupational inequities into account (future).

Objectives	Methods	Results
(1) Review recent published estimates	<ul style="list-style-type: none"> <li>- Compared with Doll and Peto's (1981)</li> <li>- Sources of variation</li> </ul>	<ul style="list-style-type: none"> <li>- Comparable (4-5%, range &lt;2;&gt;8%)</li> <li>- <b>Occupational group missing</b></li> </ul>
(2) Examine PAFs through science studies	<ul style="list-style-type: none"> <li>- Undone science, production of ignorance</li> <li>- The "epidemiological paradigm"</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Socially patterned knowledge gap</b></li> <li>- Work vs. way of life</li> </ul>
(3) Identify potential areas of improvement	<ul style="list-style-type: none"> <li>- Social liability</li> <li>- Conceptual errors</li> <li>- Scientific validity</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Focus → Health inequities</b></li> <li>- Scope → Work and employment</li> <li>- Metrics → Absolute measures</li> </ul>
(4) Test alternative quantification	<ul style="list-style-type: none"> <li>- Re-analysis of a case-control study (Icare)</li> <li>- Lung cancer &amp; occupational exposures</li> <li>- Asbestos, silica, DME, smoking</li> <li>- SEP indicators (occupation, education)</li> <li>- AF (%) using aflogit (Stata)</li> </ul>	

## Discussion

PAFs usually do not consider the impact of work on population health inequities. Yet our results suggest that SEP matters as **28.4% of lung cancer cases could be avoided in French men if BCWs and clerical/sales/service workers were non-exposed** to the 3 occupational carcinogens considered. A **gender-sensitive approach** is needed to capture women's exposures and their health impacts.

