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Labour Inspectorates Perspective on Carcinogens in Hospitals

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**Norwegian Labour
Inspection Authority**

Overview

- Background
- Occupational Carcinogens in Hospital
- Labour Inspectorates approach
- Hierarchy of Controls
- Competence at Labour Inspection

Tema: **Arbeidsrelatert kreft**



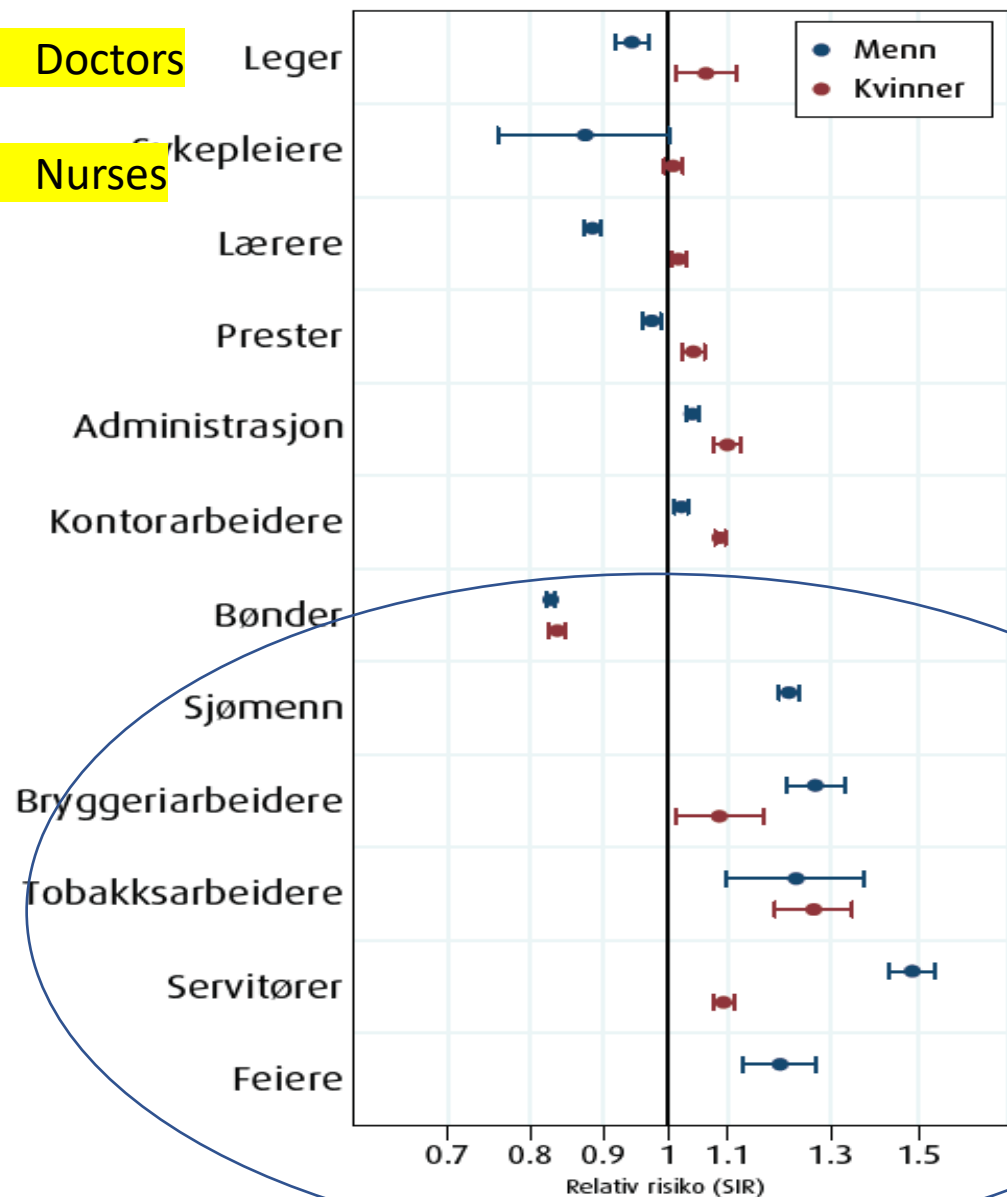
The Beginning

Occupation and Cancer, Dr. Percival
Pott 1775

Effective legislation and compliance in
1875

Doctors

Nurses



- Focus on Occupational Carcinogens since 1970s
- Estimated that approximately 3 % of all cancers in men and 0.1 % of all cancers in women can be attributed to workplace carcinogens in Norway.
- Waiters, chimney sweepers, constructions workers seafarers, and tobacco workers
- Asbestos, organic solvents, quartz, benzene, wood-dust etc

Figur S3. Relativ risiko (SIR) og 95% KI for alle kreftformer samlet i utvalgte yrkesgrupper i de nordiske landene 1961-2005. SIR = 1 angir landsgjennomsnittet

Source: Occupation and Cancer Research for Prevention: 2015

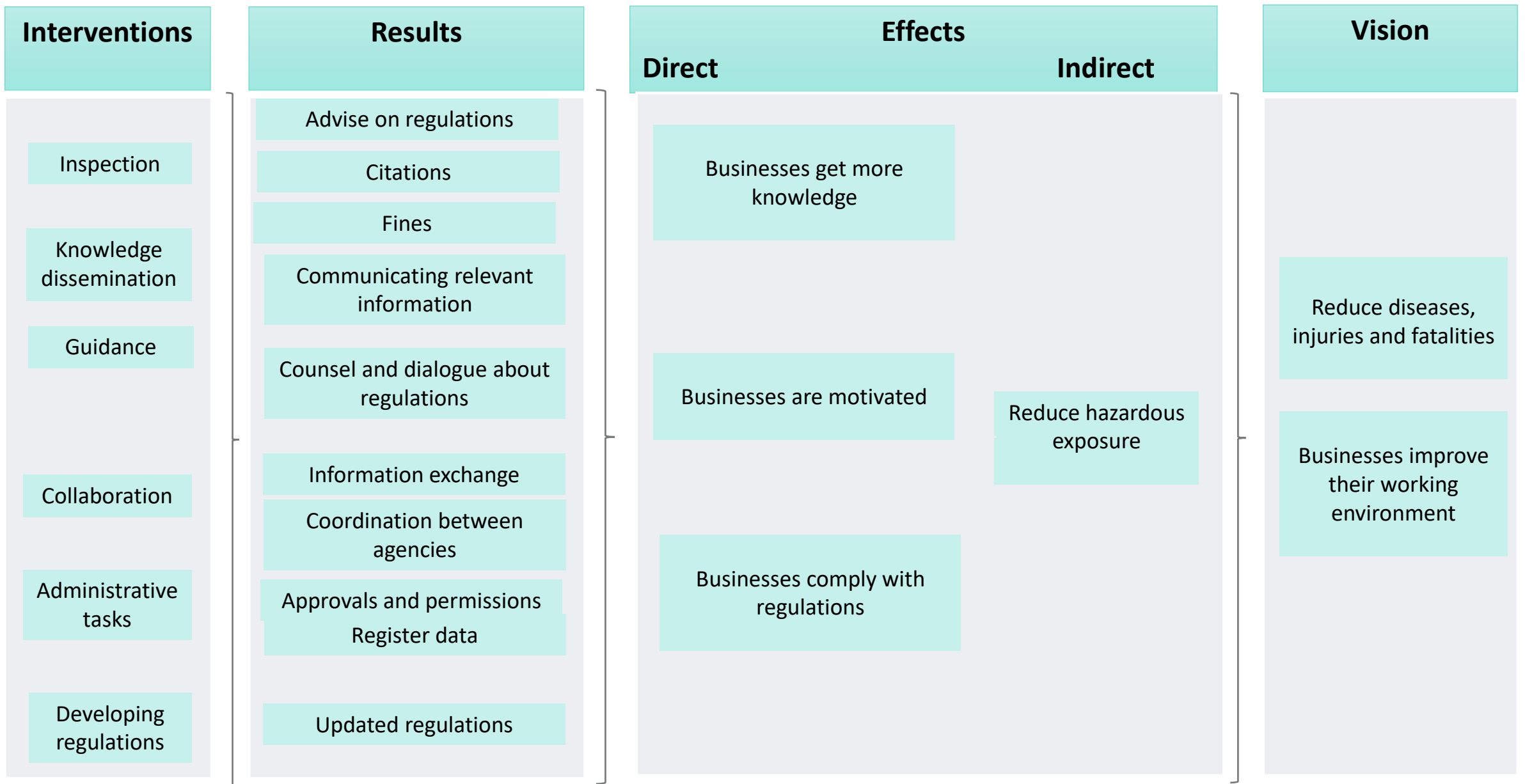
Occupational Carcinogens in Hospitals

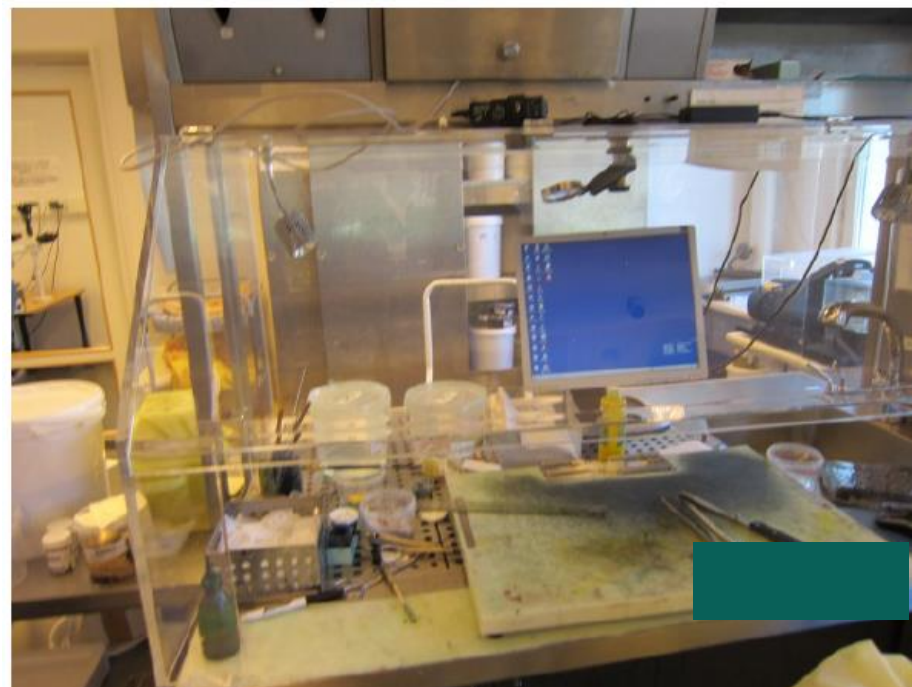
- 100 000 workers in Hospitals and a large majority is women(~ 40 000 nurses)

Carcinogen	Occupations
Cytostatic	Nurses, doctors, pharmacists, cleaners
Ionizing radiation	Radiology technicians, Nurses and doctors,
Formaldehyde	Laboratory workers
Night shift	Nurses, personal health care assistants
Diesel exhaust	Ambulance drivers

Who are we, What do we do, and how?

- The Norwegian Labour Inspection Authority is a governmental agency under the Ministry of Labour and Social Affairs, focused on occupational safety and health.
- We ensure that businesses comply with the Working Environment Act
- Inspections, guidance, developing regulations and collaborations are our main interventions to ensure compliance.





Starting from level 1, if a level is impossible or insufficient,
then the next one is applied.

1

Level 1 – Elimination, substitution, replacement

Replace the product by a less or non toxic one.

Level 1 is not an option for cytotoxic drugs as replacement would have a dramatic and undesirable therapeutic effects for the patients.

2

Level 2 – Isolation of the hazard/source containment

Use of closed systems to prevent the occurrence of any form of contamination.

3

Level 3 – Engineering controls/ventilation

Use of local and general ventilation measures.

3b

Level 3b – Administrative controls/organisation measures

Organise the work in such a way that the duration of exposure and the number of employees exposed is reduced.

4

Level 4 – Use of personal protection measures

Use personal tools such as gloves, masks, gowns, goggles or face shields and other equipment to create a temporary barrier between the contamination and the operator.

Hierarchy of Controls

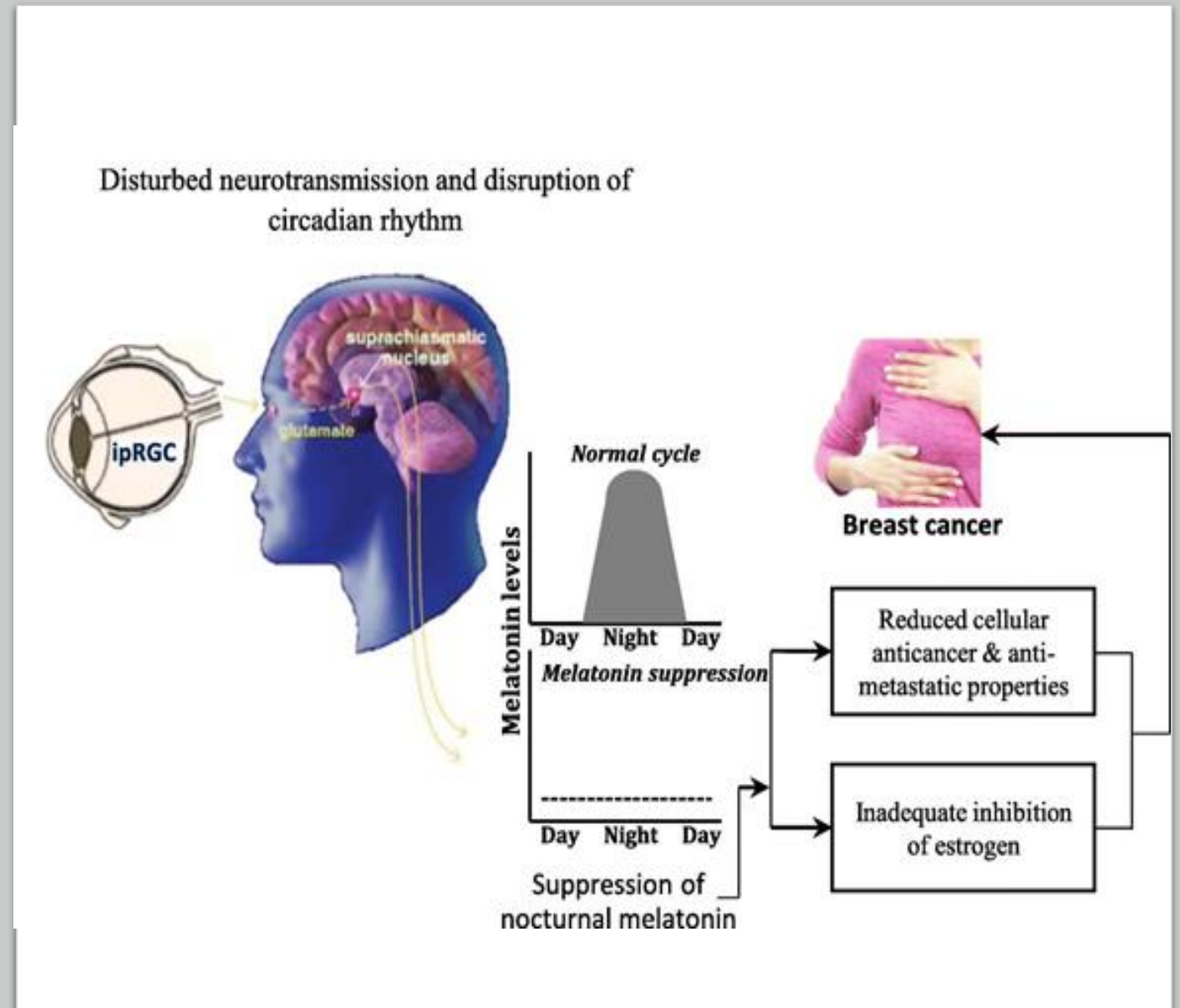
Source: https://www.europeanbiosafetynetwork.eu/wp-content/uploads/2016/05/Exposure-to-Cytotoxic-Drugs_Recommendation_DINA4_10-03-16.pdf
<https://eur-lex.europa.eu/eli/dir/1989/391>
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02004L0037-20190726>

Night Shift and Cancer

- International Agency for Research on Cancer concluded that “night shift work” is probably carcinogenic to humans
- Nordic and Norwegian studies support this perspective

Advise and guidelines by NLIA:

- Working time unit at the labour inspection
- We suggest 3 nights in a row at maximum



Intermediate effect

Labour Inspection
Interventions

Addressing the
problem

Regulations,
inspections
and guidance

Informed
employers,
healthcare
workers and
occupational
health services

Elimination /
Substitution

Engineering /
technical

Administrative /
organizational

PPE

Reduce
exposures

Prevent
cases of
occupational
cancer



Competence at Labour Inspection and regulation

- Inspectors, industrial hygienists, safety engineers, ergonomists, psychologists, social scientists, communications specialists, lawyers and occupational medicine working together
- Translating knowledge to pragmatic policy is both an art and science

In Conclusion

A culture of prevention assumes a structure of legislation

Hvala!



**Norwegian Labour
Inspection Authority**