

Dr. Kelly Roussi, Researcher/Proofreader

Tattooed individuals might present with a higher risk of lymphoma, potentially due to pigmented and enlarged lymph nodes. This Swedish study investigated this relationship.



## Objective

To investigate the link between tattoo exposure and the development of malignant lymphoma (overall and subtypes).



## Exposure group

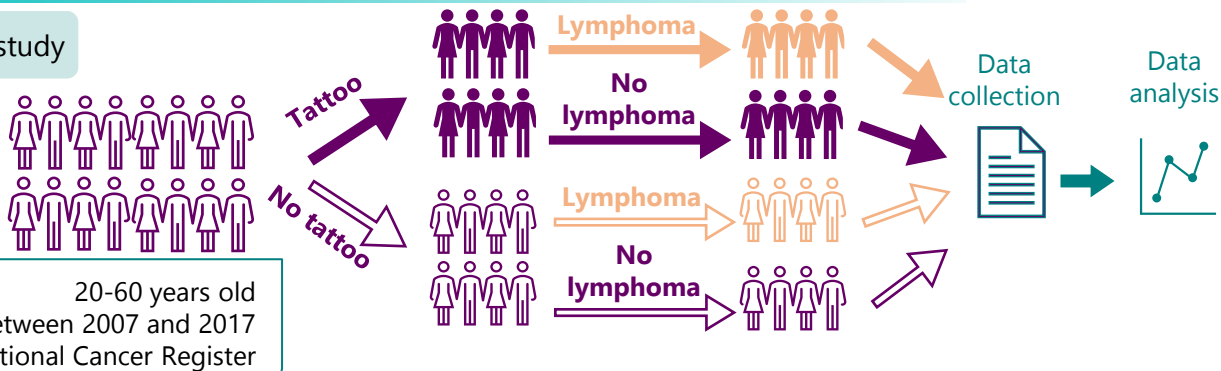
Tattooed with or without lymphoma.



## Comparator

Non-tattooed with or without lymphoma.

## Case-control study



## Subgroup analysis

## Effect modification

### Tattoos (any)

Yes = 1.21 (95% CI = 0.99 to 1.48)

p = 0.067

### Time from index year

<2 years = 1.81 (95% CI = 1.03 to 3.20)  
3 to 5 years = 0.97 (95% CI = 0.49 to 1.95)  
6 to 10 years = 1.11 (95% CI = 0.7 to 1.77)  
>11 years = 1.19 (95% CI = 0.94 to 1.50)

p = 0.19

### Tattoo area

<1 hand palm = 1.27 (95% CI = 0.99 to 1.63)  
>1 hand palm = 1.14 (95% CI = 0.86 to 1.53)

p = 0.14

### Colour tattoo

Black/Grey = 1.23 (95% CI = 0.91 to 1.68)  
Combination = 1.21 (95% CI = 0.95 to 1.54)

p = 0.16

### Laser tattoo removal

Yes = 2.63 (95% CI = 0.96 to 7.18)  
No = 1.17 (95% CI = 0.97 to 1.46)

p = 0.051

## IRR (Incidence Rate ratio) values for tattooed vs non-tattooed

Comparator group matched by age and sex to exposure group.

Adjusted for sex, age, educational attainment, smoking, marital status, and household disposable income

- o This study does not find strong evidence for the existence of **associations** between tattoos and higher risk of lymphoma, with most sub-group analyses also failing to reach statistical significance.
- o The existence and potential significance of other confounding factors, such as **smoking or socioeconomic status**, which were found to influence the impact of tattoos in fully adjusted analyses in the current study, could be linked to the rise in lymphoma rates.
- o Does **family history** have an impact? Could the effects observed be attributed to prior family history of lymphoma rather than the existence of tattoos?
- o Has the **ink used in the industry changed** compared to the early years of tattoos, and if so, has this change been considered? Follow-up work should explicitly consider ink eras in the study design.