

## Conclusion

Global variations in CLE incidence and prevalence are influenced by gender, age, and ethnicity. Females exhibited higher incidence and prevalence rates than males, while individuals of black ethnicity had higher rates than whites. Studying genetic and environmental factors can reveal underlying causes. Further research is needed on CLE mortality and risk factors.

## Background

- Cutaneous lupus erythematosus (CLE) is an enduring autoimmune condition that primarily impacts the skin. It is distinguished by a range of skin symptoms, such as rashes, lesions, and heightened sensitivity to light<sup>1</sup>
- CLE is divided into different subgroups, including acute cutaneous lupus erythematosus (ACLE), subacute cutaneous lupus erythematosus (SCLE), and chronic cutaneous lupus erythematosus<sup>2</sup>
- Chronic cutaneous lupus erythematosus (CCLE) comprises a variety of distinct conditions, including discoid lupus erythematosus (DLE), lupus erythematosus profundus, chilblain cutaneous lupus, and lupus tumidus<sup>2</sup>
- Individuals living with CLE frequently encounter a reduced quality of life, accompanied by emotional distress. Therefore, understanding CLE epidemiology is crucial for timely diagnosis and treatment<sup>3</sup>

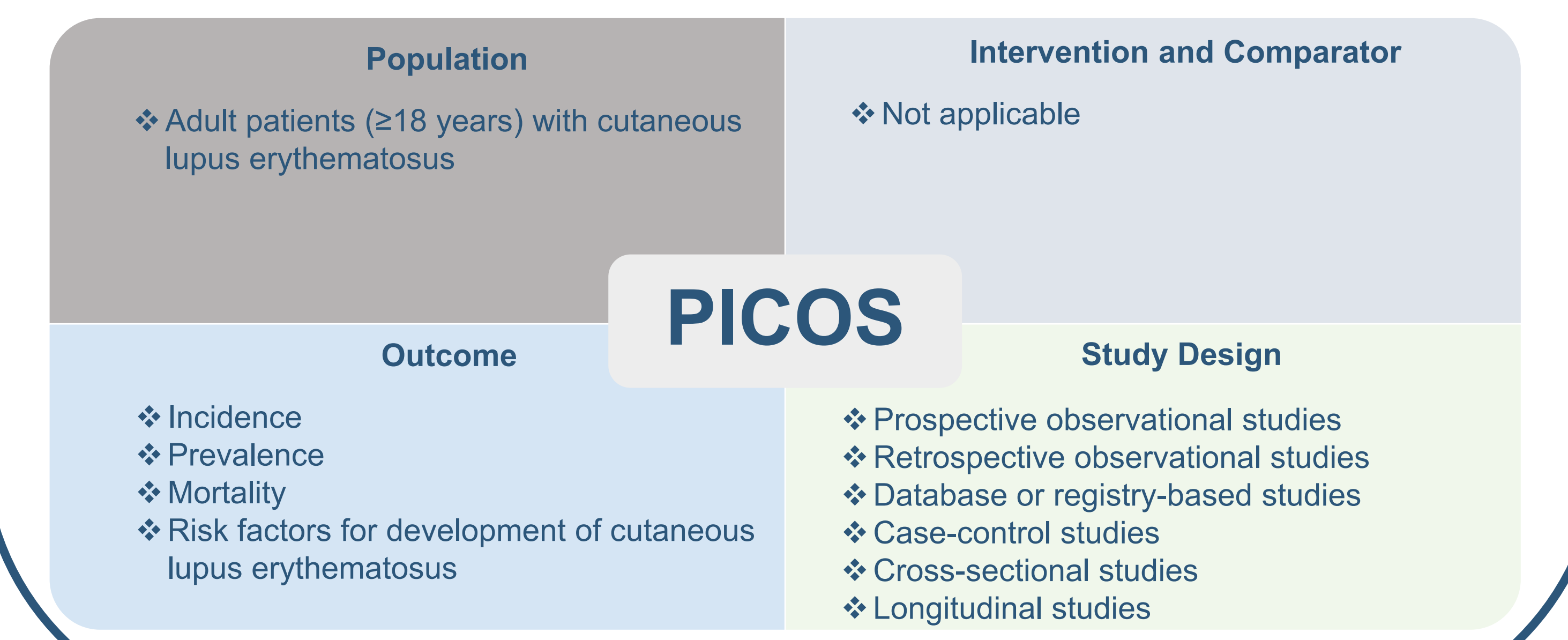
## Objective

- The objective of this systematic literature review (SLR) was to investigate the incidence, prevalence, mortality rates, and risk factors associated with CLE

## Methodology

- The review followed the standard methodology for conducting SLRs as per the guidelines provided by the National Institute for Health and Care Excellence (NICE) and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA);
- Key biomedical databases (Embase and MEDLINE) were searched from database inception to May 2023 to identify relevant CLE studies reporting epidemiological data
- The SLR encompassed a comprehensive range of study designs, including prospective and retrospective observational studies, database and registry-based research, case-control investigations, cross-sectional analyses, and cohort studies, to gather epidemiological evidence pertaining to CLE. The pre-defined PICOS criteria for study selection are presented in Figure 1
- The SLR followed a standard two review and quality control process for data collection and extractions.

Figure 1: Prespecified PICOS eligibility criteria for selection of evidence

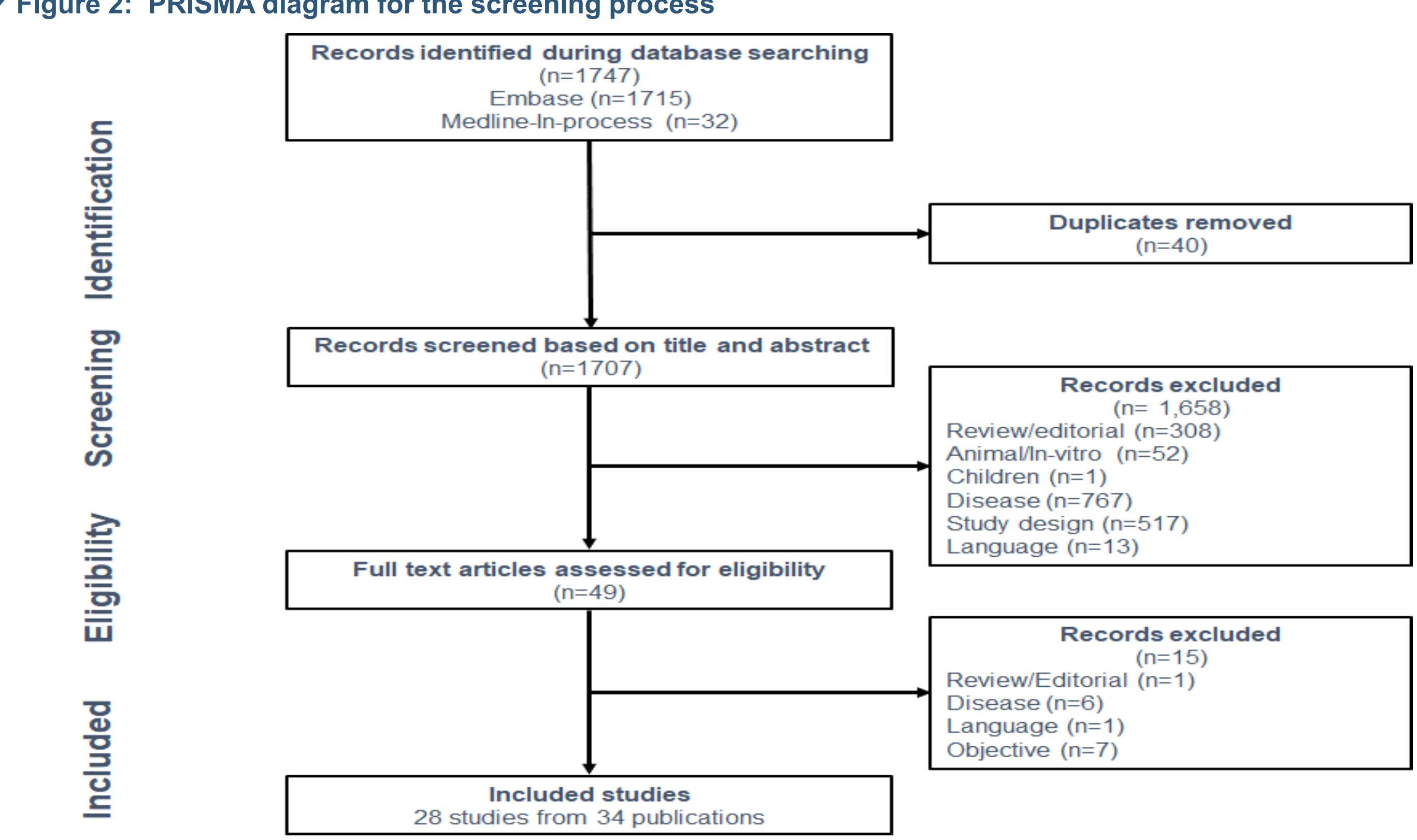


## Results

- The SLR included 28 studies (North America=12; Europe=9; Asia=3; South America=2; Africa, and Oceania=1 each) covering incidence (n=13), prevalence (n=12), mortality rates (n=2), and risk factors (n=5) in CLE patients
- The age and gender-adjusted incidence rates for CLE patients ranged from 2.7 cases per 100,000 person-years in Denmark to 4.3 cases per 100,000 person-years in the USA. Further, regarding CLE subtypes, subacute CLE exhibited a lower incidence rate (0.6 to 1.0 per 100,000 person-years) compared to chronic CLE (0.8 to 3.9 per 100,000 person-years) (Figure. 3 and Figure 4).
- Likewise, the age and gender-adjusted prevalence rate for CLE patients ranged from 30.1 to 108.9 per 100,000 persons, with lower prevalence observed in subacute CLE compared to chronic CLE (Figure 3).
- Females exhibited higher incidence and prevalence rates than males, while individuals of black ethnicity had higher rates than whites; rates generally increased with age, but no clear trend emerged (Figure 5).

## Results (Cont'd)

Figure 2: PRISMA diagram for the screening process



- The presence of CLE suggested minimal impact on mortality (standardized mortality ratio of 0.6 and 1.2) in two USA-based studies.
- Further, five studies identified smoking as a risk factor for CLE and its subtypes, particularly discoid lupus erythematosus.

Figure 3: Incidence and prevalence rate of CLE

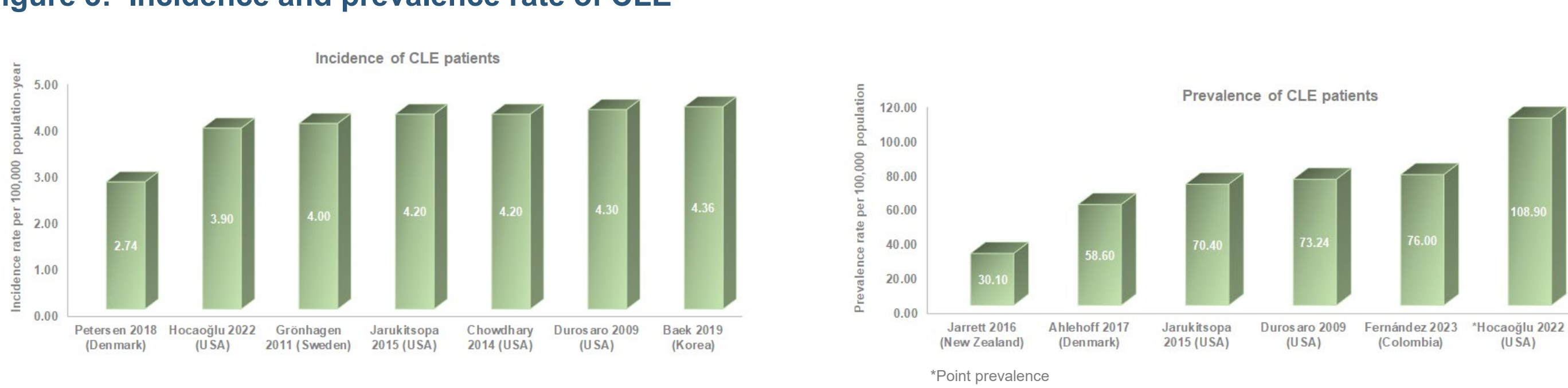


Figure 4: Incidence rate of CLE subtypes a) DLE subtype; b) Other subtypes; \*Subacute CLE and \*\*Chronic CLE

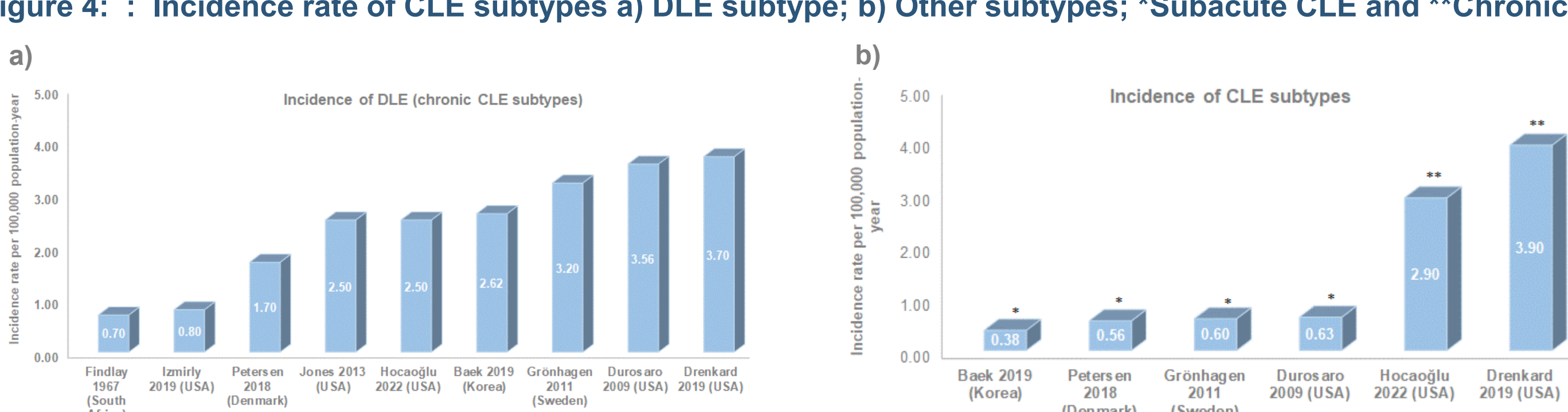
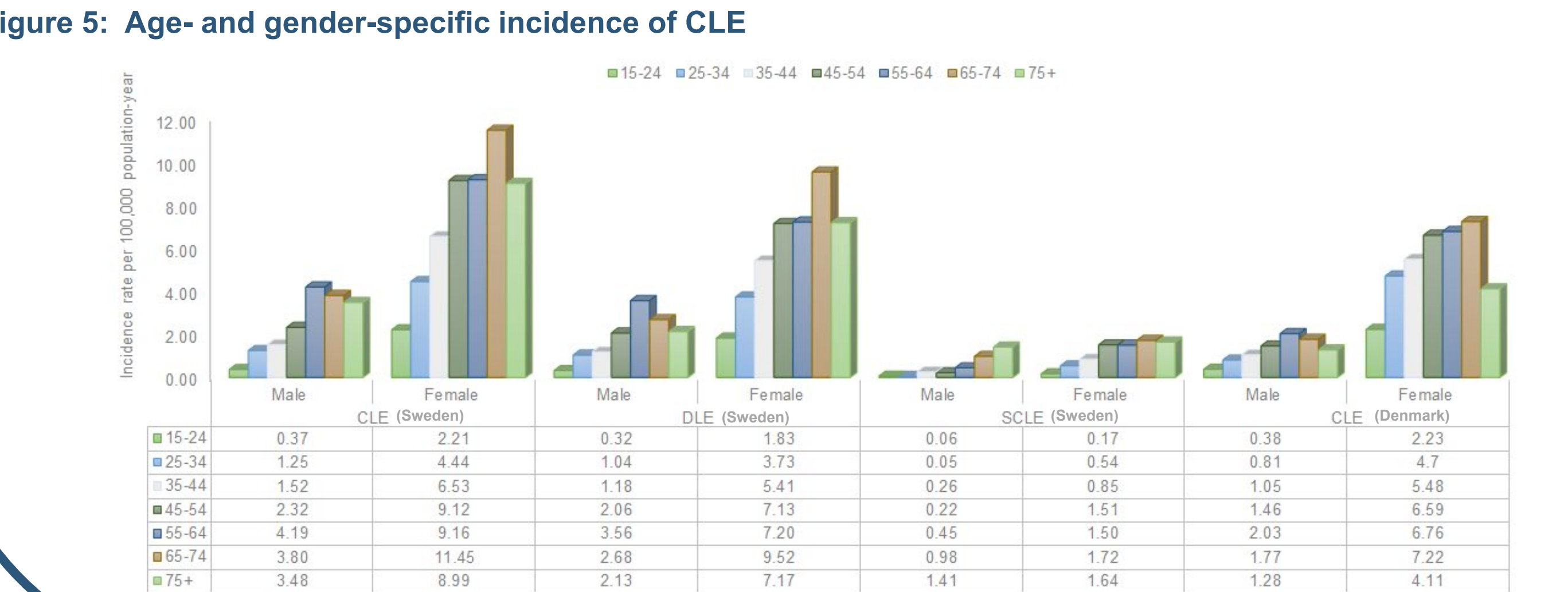


Figure 5: Age- and gender-specific incidence of CLE



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## Disclosure

Pankaj Rai, Sunil Kumar, and Barinder Singh, the authors, declare that they have no conflict of interest

## Sponsorship

The authors conducted this research independently, without any external collaboration