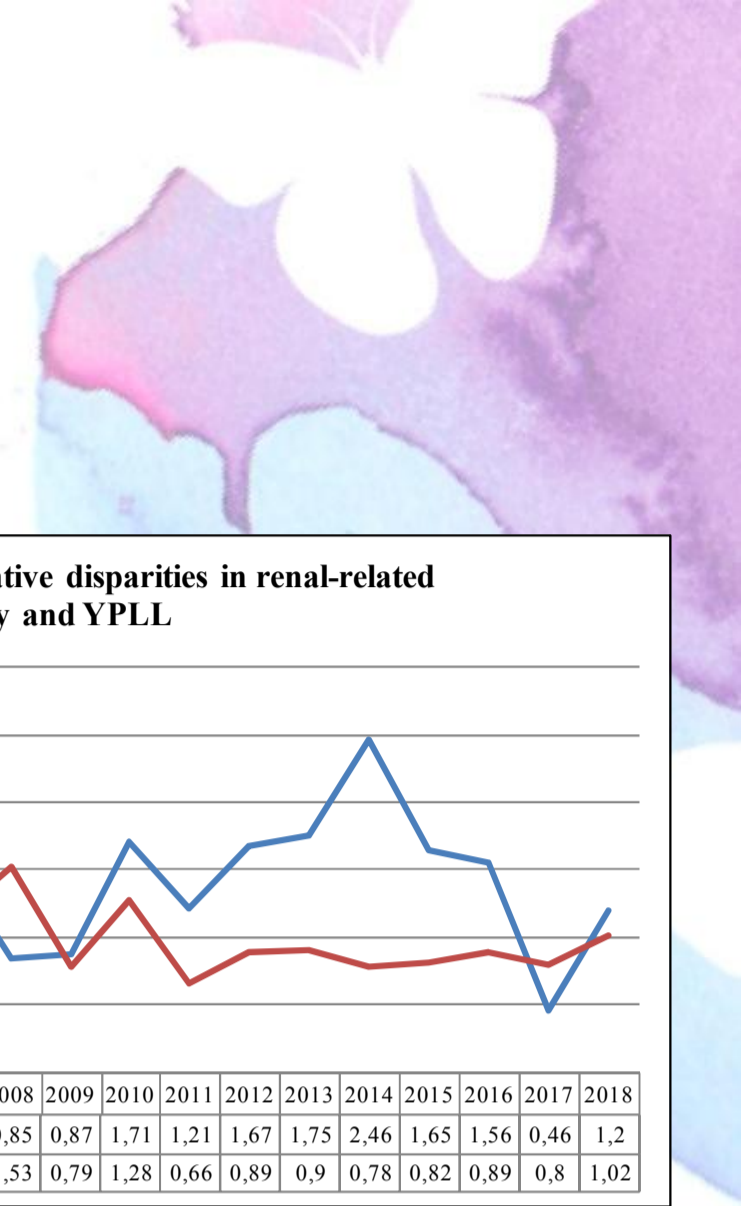


Racial disparities in renal disease-related mortality in Cuban patients with systemic lupus erythematosus

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1. Background/Aim

By and large, systemic lupus erythematosus (SLE) is more prevalent and with less favorable outcomes in non-white populations. To overcome these differences and reduce the short-, medium-, and long-term impact of SLE in disadvantaged populations, it is essential to increase awareness of the disease, improve access to health care, and provide care to these patients in a consistent manner, regardless of the severity of their disease.¹ In this context, premature mortality related to renal involvement in SLE patients is of particular concern.^{1,2}

Despite these facts, little research has been conducted in Cuba aimed at understanding the unequal impact of renal disease on mortality in white and non-white SLE patients.

Our aim was to identify racial disparities in renal disease-related mortality in Cuban patients who died from SLE.

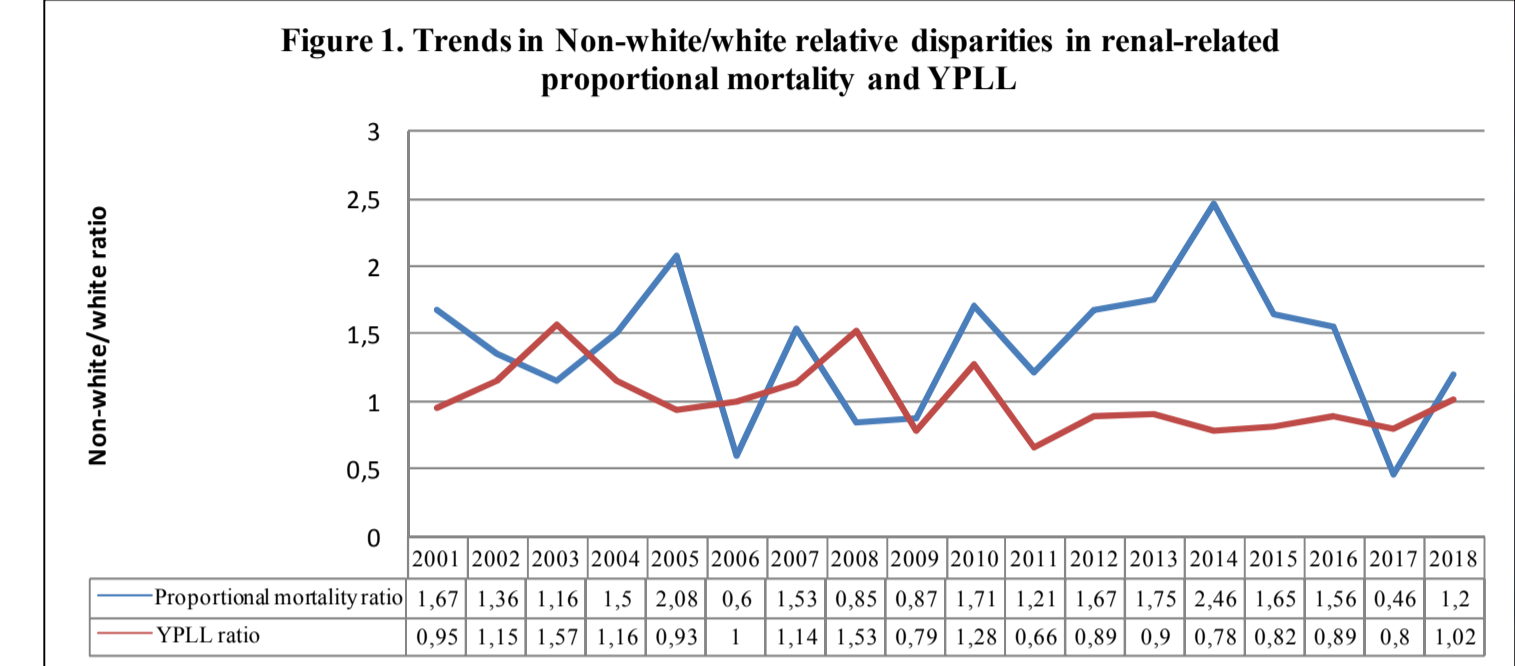
2. Methods

This is a population-based study using the mortality database of the Cuban Ministry of Public Health between 2001 and 2018. Based on International Classification of Disease Tenth Revision (ICD-10) code M32, there were identified the deaths from SLE (as the underlying cause of death) and its renal-related associated causes-of-death, defined as: ICD-10, codes: N00 to N18. To calculate the years of potential life lost (YPLL), each decedent's age at death was subtracted from a predetermined age of 75 years. As measures of absolute and relative disparities, differences and ratios were calculated between white/non-white, respectively.

3. Result

1 452 SLE deaths were identified, of which 414 (28.5%) were related to renal disease. Non-whites had more deaths related to renal disease than whites (222 versus 192; absolute difference: 30; ratio: 1.15). Non-whites accumulated an excess of 1 795 YPLL over whites (Table 1). In non-whites, YPLL due to renal causes represented 35.7% of the total premature mortality burden, while in whites it represented 27.1% (percentage difference: 8.6; ratio: 1.31). Trends in Non-white/white relative disparities in renal-related proportional mortality and YPLL are shown in Figure 1.

| Cause of death | ICD-10 codes | Proportional mortality (%) | | Measures of disparities | |
|---|--------------|----------------------------|--------|---------------------------|-------|
| | | Non-whites | Whites | Percentage difference (%) | Ratio |
| Overall renal disease-related mortality | N00 to N18 | 33.3 | 24.4 | 8.9 | 1.36 |
| Glomerular diseases | N00 to N08 | 29.9 | 21.1 | 8.8 | 1.41 |
| Tubulo-interstitial renal diseases | N10 to N16 | 1.6 | 1.3 | 0.3 | 1.23 |
| End-stage renal disease | N18 | 15.4 | 11.1 | 4.3 | 1.38 |
| Cause of death | ICD-10 codes | YPLL (absolute number) | | Measures of disparities | |
| | | Non-whites | Whites | Absolute difference | Ratio |
| Overall renal disease-related mortality | N00 to N18 | 7 917 | 6 122 | 1 795 | 1.29 |
| Glomerular diseases | N00 to N08 | 7 162 | 5 211 | 1 951 | 1.37 |
| Tubulo-interstitial renal diseases | N10 to N16 | 334 | 325 | 9 | 1.01 |
| End-stage renal disease | N18 | 3 326 | 2 956 | 370 | 1.12 |



4. Conclusion

Despite a slight decrease in recent years, non-white SLE patients suffer a higher premature mortality burden related to renal disease than whites. Further research is needed to understand the biological and social factors that determine these outcomes in the Cuban context.

5. References

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