

## Introduction

Previous studies from the 1990s reported differences in survival following diagnosis of Non Hodgkin's Lymphoma (NHL) by deprivation in both Scotland and elsewhere [1]. This study utilises more recent data to investigate whether or not these differences persist.

## Aim

To investigate the influence of deprivation on relative survival following a diagnosis of NHL.

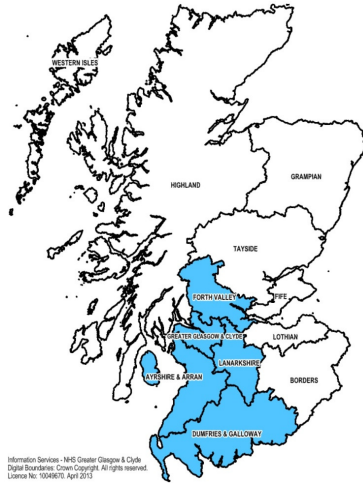


Figure 1. Population catchment area

## Method

Data from all cases of NHL diagnosed between 2004 and 2007 in people resident in the 5 highlighted Health Boards (population 2.2 million) were provided by the haemato-oncology managed clinical network. These data were subsequently enhanced by linkage to cancer registry and SIMD2006 deprivation group based on postcode of residence. Relative survival (RS) is the ratio of the observed survival in the NHL cases to that expected from normal background mortality due to age, gender, geographical area, calendar period and deprivation. Analyses was carried out using the STRS procedure in STATA v11.2 [2] to estimate relative survival at 1 and 5 years.

## Results

The 5-year relative survival was 61.9% (95%CI 57.4, 66.2) in males and 65.7% (95%CI 61.1, 70.0) in females. Both these figures were higher than reported in previous studies[1,3]. Deprivation gaps still exist at both 1 and 5 years. In males at 1 year the RS was 73.1% in the most deprived group compared with 78.7% in the most affluent. By 5 years the gap had widened (RS 59.0% & 68.5% respectively). In females at 1 year the most deprived had RS 75.3% compared with 77.5% in the most affluent. By 5 years the gap had again widened (RS 61.4% & 69.6% respectively). The deprivation gaps are shown in Figure 2. Other results are summarised in Table 1. RS as expected varies by age at diagnosis. There was little difference in RS at 1 year by either Health board or year of diagnosis but more differences by 5 years. RS at 5 years has improved slightly between 2004-2007.

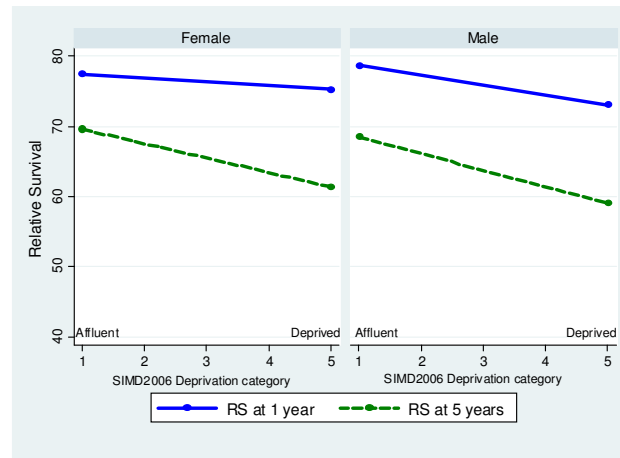


Figure 2. Deprivation gap in RS by gender

## Conclusion

The deprivation gap remains in both males and females and increases with time from diagnosis.

## Acknowledgements

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	N (%)	RS 1 Year	RS 5 Year
Total NHL cases	1520 (100)	77.5%	63.8%
Gender Female	743 (48.9)	79.0%	65.7%
Gender Male	777 (51.1)	76.0%	61.9%
Age group <=49 yrs	217 (14.3)	88.9%	81.1%
Age group 50-59 yrs	240 (15.8)	88.9%	71.8%
Age group 60-69 yrs	375 (24.7)	82.1%	68.5%
Age group 70-79 yrs	441 (29)	70.9%	57.2%
Age group >= 80 yrs	247 (16.3)	58.4%	40.5%
Deprivation 1 Most Affluent	218 (14.3)	78.1%	79.1%
Deprivation 2	232 (15.3)	79.1%	65.1%
Deprivation 3	295 (19.4)	79.6%	65.8%
Deprivation 4	334 (22)	77.6%	61.4%
Deprivation 5 Most Deprived	379 (24.9)	74.2%	60.3%
Health Board Ayrshire & Arran	208 (13.7)	84.3%	72.7%
Health Board Glasgow & Clyde	742 (48.8)	75.8%	62.5%
Health Board Lanark	297 (19.5)	77.0%	59.7%
Health Board Forth Valley	156 (10.3)	77.3%	67.2%
Health Board Dumfries&Galloway	117 (7.7)	77.4%	61.1%
Year Diagnosis 2004	379 (24.9)	79.5%	62.6%
Year Diagnosis 2005	396 (26.1)	72.2%	62.4%
Year Diagnosis 2006	352 (23.2)	79.0%	64.9%
Year Diagnosis 2007	393 (25.9)	79.4%	67.8%

Table 1. Study population & RS at 1 & 5 years

## Selected References

- [1] Bray C, Morrison M, McKay P. Socio-economic deprivation and survival of non-Hodgkin lymphoma in Scotland. *Leukemia & Lymphoma*, 2008;49:917-923.
- [2] Dickman PW, Sloggett A, Hills M, Hakulinen T. Regression models for relative survival. *Statistics in Medicine* 2004;23:51-64.
- [3] Shack LG, Rachet B, Brewster DH, Coleman MP. Socioeconomic inequalities in cancer survival in Scotland 1986-2000. *British Journal of Cancer*, 2007;97:999-1004.

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