

Does socio-economic disadvantage affect radiotherapy utilisation in rectal cancer?

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Aims

- Calculate the actual radiotherapy utilisation rate (A-RUR) for rectal cancer
- Compare with optimal rate (O-RUR)¹
- Identify influencing factors
- Assess shortfall effects on optimal tumour control and patient survival²

Methods

- NSW Central Cancer Registry data (2009-2011)
- Linked radiotherapy service data
- Assessment of A-RUR and influencing factors
- 5-year local control (LC) and overall survival (OS) shortfall effect estimation

Results

- Rectal cancer A-RUR 36% vs O-RUR 55%
- Shortfall effects of radiotherapy (RT) underuse : 165 LC failures and 51 deaths in 3 years (*Figure 1*)
- Significant ($p < 0.05$) Influencing factors – Older age, low socio-economic status (SES), lower tumour stage (*Figure 2*)

Figure 1. Shortfall effects

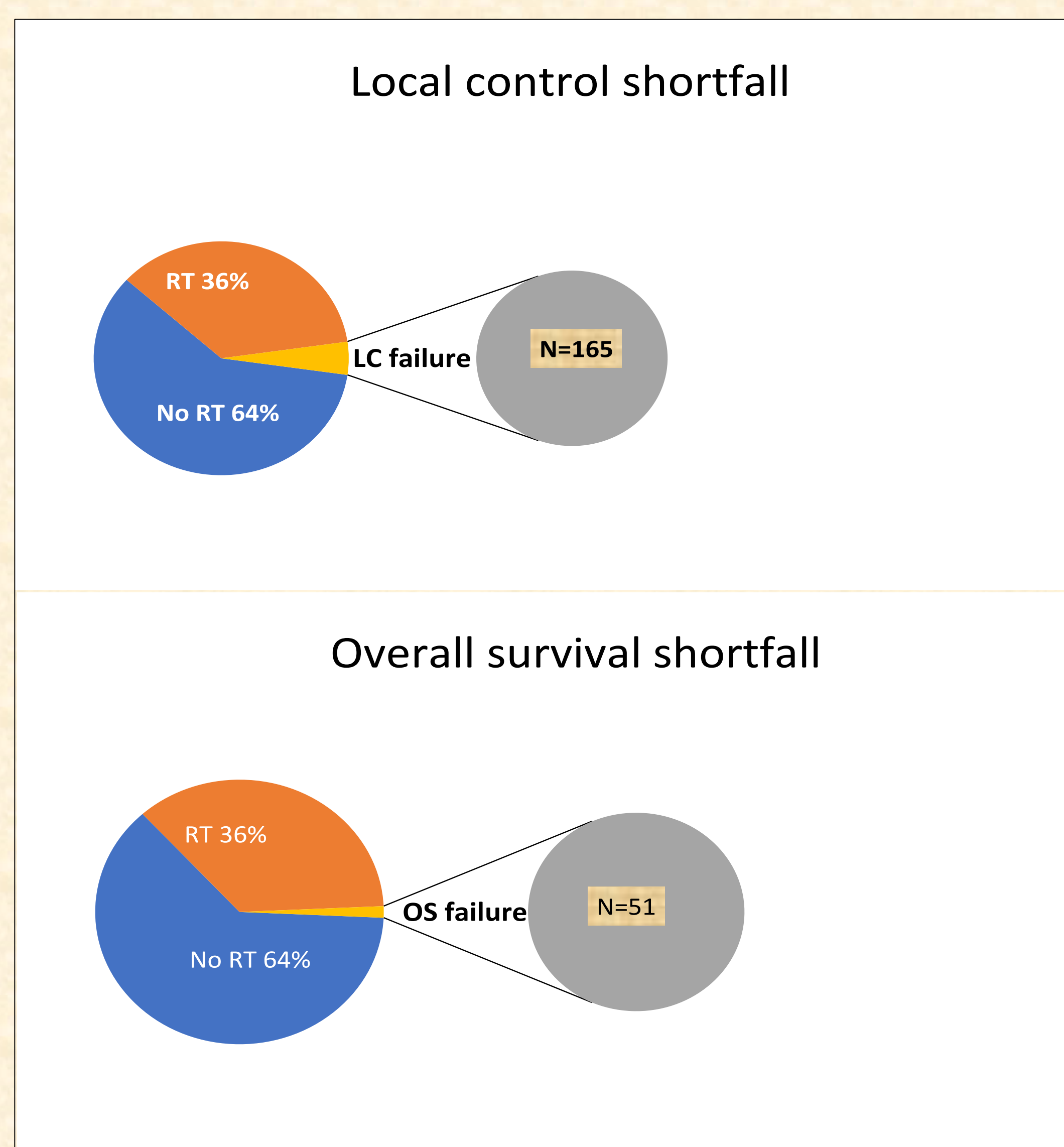
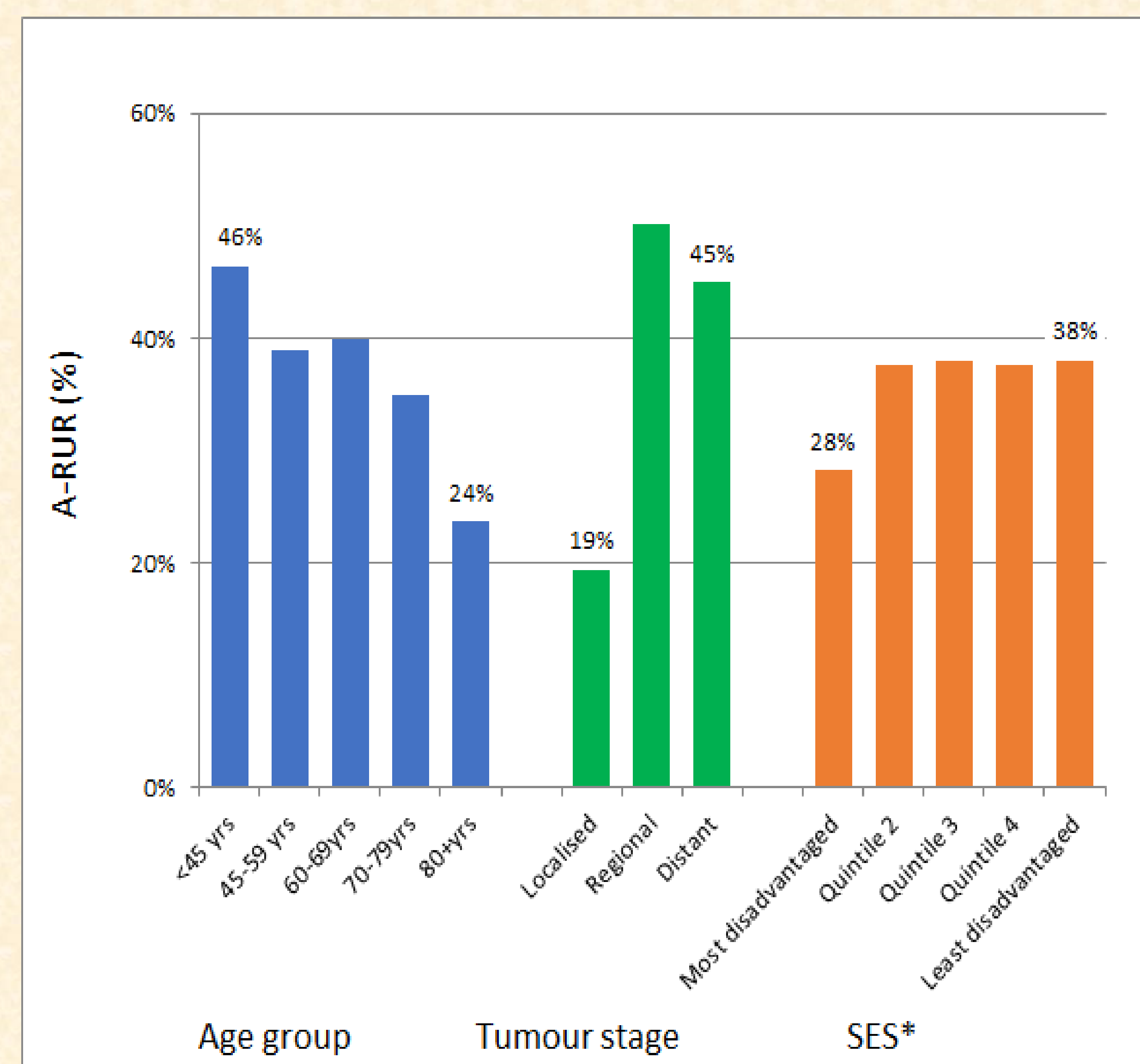


Figure 2. Influencing factors



*SES- Index of relative socio-economic disadvantage (IRSD) ranking of residents in an area

Conclusions

- Demographic and socio-economic factors affect RT utilisation at population level
- A-RUR decreased with age and was lower in the most disadvantaged group compared to less disadvantaged groups
- Radiotherapy underutilisation may have resulted in 165 local failures and 51 deaths during the study period

References

1. Barton MB et al. Radiother Oncol 2014;112(1):140-4.
2. Hanna TP, Shafiq J et al. Radiother Oncol 2018;126(2):191-7.

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