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Title

Do cancer patients living further from the cancer center receive less post-diagnostic care? A Scottish data-linkage study

Priority 1 (Research Category)

Cancer research (not screening)

Presenters

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Abstract

Context: Rural dwellers with cancer in Northeast Scotland are less likely to survive to one year than urban dwellers, but reasons are unclear. We hypothesised that rural cancer patients might receive specialist care from the regional cancer center at Aberdeen Royal Infirmary (ARI) differently in the first year following diagnosis.

Objectives: To explore associations between travelling time to ARI and number of post-treatment hospital outpatient appointments, hospital admissions, and survival in the first year following a cancer diagnosis.

Dataset: We updated the original Northeast and Aberdeen Scottish Cancer and Residence (NASCAR) cohort from National Records of Scotland Death Records, hospital activity registers, and the Scottish Cancer Registry to create NASCAR+.

Study Design and Analysis: Travel times were calculated using Google API. Regression analyses explored associations between different categories of travel-time, hospital outpatient appointments, hospital admissions and survival

Population Studied: 17,639 patients diagnosed with one of eight common cancers in Northeast Scotland and the Northern Isles between 2007 and 2017.

Results: Mainland-dwellers living >30 minutes from ARI and island-dwellers, spent more days in hospital in the year following diagnosis. Mainland-dwellers living >60 minutes from ARI had more appointments in the year following diagnosis, but island-dwellers had fewer. Island-dwellers had poorer one-year survival, but mainland rural-dwellers did not. Mainland rural and island-dwellers were no more likely to have emergency admissions, but when they did, spent more days in hospital and had higher subsequent mortality.

Conclusions: Northeast Scotland rural dwellers diagnosed with cancer spent more time in hospital than urban counterparts with implications for family and finances. This may be compounded for more remote

mainland-dwellers with more hospital appointments in the first year after-treatment with, in contrast, island-dwellers receiving fewer appointments. The most remote patients (mainland & island) are no more likely to have an emergency hospital admission in the first year, but where they do, they are in-hospital for longer and less likely to survive. Overall, it seems that travelling time to the regional cancer centre may affect the way care is received and treatment complications managed in the first year following a cancer diagnosis with implications for family, finance and survival.