

# Impact of geography on Scottish cancer diagnoses in primary care: Results from a National Cancer Diagnosis Audit

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*Cancer Epidemiology*



## Background

A recent meta-analysis of global research found cancer patients living in rural locations were 5% less likely to survive than patients living in urban locations. This project sought to describe and compare primary-care involvement in the diagnosis of cancer between rural and urban patients in Scotland, and the length of key diagnostic pathway intervals between rural and urban cancer patients in Scotland.



## Methods

Cancer diagnostic pathway data was collected from primary-care medical records during the Scottish National Cancer Diagnosis Audit. Patients were defined as 'rural' or 'urban' based on geographical postcodes and key cancer diagnostic pathway intervals (primary, diagnostic, secondary, and treatment) were compared using statistical analysis.



## Results

- 73 Scottish general practices provided data on 1,905 cancers diagnosed in 2014
- Rural patients did not have higher odds of prolonged diagnostic intervals
- Rural patients were significantly more likely to have a cancer alarm feature at presentation and three or more primary-care consultations prior to referral
- Rural GPs were significantly more likely to perceive an avoidable delay in a patient's diagnostic pathway, although this was not supported by pathway length compared to urban GPs



## Conclusions

No evidence rural patients were more likely to experience prolonged cancer diagnostic delays, but rural patients may experience primary care differently prior to a cancer diagnosis. Further research is required in this area but the effect on outcome is probably negligible.

Full reference: Murchie P, Adam R, Khor WL, Smith S, McNair E, Swann R, Witt J, Weller D. Impact of geography on Scottish cancer diagnoses in primary care: Results from a national cancer diagnosis audit. *Cancer Epidemiol.* 2020 Jun;66:101720  
<https://pubmed.ncbi.nlm.nih.gov/32361641/>

This National Cancer Diagnosis Audit is operationally managed by Cancer Research UK, but is a broad partnership that involves support and input from: The Royal College of General Practitioners, Macmillan Cancer Support, the National Cancer Registration and Analysis Service, NHS England, Public Health Scotland, Scottish government, Public Health Wales (specifically the Welsh Cancer Intelligence and Surveillance Unit), the Wales Cancer Network, the Northern Ireland Cancer Registry (at Queen's University Belfast), as well as patient representatives and academic partners.



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