# LUNG CANCER SURVIVORSHIP OUTCOMES IN MANCHESTER

## Using the 'Routes from Diagnosis' framework to understand variations in survivorship outcomes for Lung Cancer in the City of Manchester

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#### Background

'Routes from Diagnosis'<sup>1</sup> (RfD) links and analyses routinely collected cancer registry and HES data to map out the cancer journey for whole cohorts of patients over up to 7 years after diagnosis. This approach, which brings together information on survival, morbidities and demographics, has been replicated in the City of Manchester and expanded to include outpatient and A&E activity sourced from local providers, with work ongoing to include primary care and palliative care data. The result is a pseudonymised full pathway view of the survivorship of all City of Manchester lung cancer patients.

### those of the national English cohort.

Subsequently, local provider data were used to construct a patient-level pseudonymised dataset capturing these patients' treatment activities across multiple settings of care. This dataset was used to investigate, at a more detailed level, geographic variations in demographics, service use and outcomes of breast cancer patients across the local health economy.

with 54% of lung cancer patients surviving less than 6 months post-diagnosis in the City compared to 56% in the English national cohort (Fig. A).

activity in the years leading up to diagnosis, particularly for patients with ultimately very poor post-diagnosis survival (Fig. D).

#### Conclusions

Localising the Routes from Diagnosis However, local provider data, which provide framework has highlighted the inequalities in greater geographic detail, reveal a large degree of variation in demographics, service outcomes that can exist across a local health economy, but which may be masked when usage patterns and survivorship outcomes across the local health economy (Fig. B). considering aggregate 'average' data alone. It has also highlighted the high number of These cross-City variations in demographics unplanned acute sector contacts lung cancer and activity are replicated in patients patients have pre-diagnosis, representing potential opportunities for earlier diagnosis. survivorship: 54% of North Manchester CCG patients survive less than 6 months Outputs from the analysis have identified post-diagnosis, compared to 42% in areas for service redesign interventions to Central Manchester CCG, 61% in South improve the outcomes and delivery of cancer Manchester CCG. care services in the City of Manchester, supplementing the other work-streams that Macmillan is pursuing in the area.

#### Methods

The RfD methodology, applied to a linked national NCDR-Inpatient HES dataset, was used to compare survivorship outcomes of patients diagnosed with lung cancer in 2002 and 2004 in the City of Manchester with

#### Results

As a cohort, City of Manchester patients diagnosed with lung cancer in 2002 and 2004 were slightly younger at diagnosis and significantly more deprived than the English national cohort (33% vs. 27% aged under 65 at diagnosis, 75% vs. 27% in most deprived quintile of the IMD). However, data analysis demonstrated a relatively similar survivorship outcome profile for Manchester patients compared to the national cohort,

Additionally, when patients from all three CCGs were considered together, analysis of pre-diagnosis acute sector activity revealed a considerable quantity of unplanned

**References:** <sup>1</sup> Routes from Diagnosis, Macmillan Cancer Support, 2014

**Figure B:** Demographic differences between patients, by CCG of residence

Deprivation (measured by Index of Multiple Deprivation)

Age at Diagnosis Distribution

#### 2002 & 2004 Lung

417

**Figure A:** Distribution of patients among Survivorship Outcome Groups, National vs. Manchester





<ul> <li>0 - 6 months survival</li> <li>6 months - 7 years survival</li> <li>6 months - 1 year</li> <li>6 months - 1 year</li> <li>6 months - 1 year</li> </ul>	Limited Survival	Limited – Moderate Survival	On-going Survival
survival with cancer complications 4 6,7,8 Living with or beyond cancer with no other inpatient morbidities	<b>2</b> 6 months – 1 year survival with cancer	<ul> <li>with other inpatient morbidities</li> <li>6 months – 7 years survival with no other inpatient</li> </ul>	cancer complications 6,7,8 Living with or

Note: 'cancer complications' includes metastases, additional primary cancers and recurrence; 'other inpatient diagnoses' includes non-cancer complications as defined by clinicians

**Figure C:** Distribution of patients among Survivorship Outcome Groups, by CCG of residence















#### **Figure D:** Selected unplanned inpatient episodes, by survivorship outcome

<b>0-6 month survival</b> (N = 176)	
<b>6-12 month survival</b> $(N = 52)$	
>12 month survival with cancer complications $(N = 76)$	
>12 month survival with non-cancer complications $(N = 49)$	
>12 month survival and uncomplicated (N = 10)	
	-3000 -2500 -2000 -1500 -1000 -500 0 500 1000 1500 2000 2500 Time post-diagnosis (days)



Note: In some cases adjacent Survivorship Outcome Groups have been combined to suppress small numbers of patients. These merged groups are indicated by a gradient of colour

#### Cancer-related Respiratory Circulatory Signs and symptoms A&E attendance

Note: Diagnoses use the following ICD-10 Chapters: "Cancer-related", Chapters C, D and Z; "Respiratory", Chapter J; "Circulatory", Chapter I; "Signs & Symptoms", Chapter R



Macmillan Cancer Support, registered charity in England and Wales (261017), Scotland (SC039907) and the Isle of Man (604).

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For further findings, see Routes from Diagnosis: the most detailed map of cancer survivorship yet



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