

# INVESTIGATING PALLIATIVE OPIOID PRESCRIBING

## Using linked patient-level community prescribing data in the Scottish Routes from Diagnosis framework

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### Background

The Scottish Routes from Diagnosis (SRfD) project forms part of the Macmillan Cancer Support/ NHS Scotland Information Services Division (ISD) partnership. SRfD uses routinely collected health data to quantitatively describe the pathways patients follow after diagnosis with cancer.

The Prescribing Information System for Scotland (PIS)<sup>1</sup> contains details of all NHS medications prescribed and dispensed in the community and is available at patient-level.<sup>2</sup> The PIS dataset includes data on opioids prescribed to cancer patients in the community.

Opioids are among the most common drugs used for symptoms control<sup>3</sup>, and prescribing of strong opioids can be a proxy for use of dedicated palliative programmes<sup>4</sup>. However, it is not known how commonly opioids are prescribed to palliative cancer patients in Scotland. The SRfD framework aims to use this routine prescribing data to learn more about the patterns of opioid prescribing in the community in cancer patients towards the end of life.

### Methods

We identified people living in Scotland diagnosed with breast (female only), colorectal, lung, or prostate cancer in 2012 through the Scottish Cancer Registry.<sup>1</sup> To investigate the survivorship experience across the different cancers, these cases were linked to a variety of national health datasets, including hospital activity<sup>1</sup>, PIS data and mortality data.<sup>1</sup> Data were linked using the Community Health Index Number (CHI),<sup>1</sup> the unique healthcare patient identifier in Scotland.

We examined the proportion of patients prescribed an opioid [defined as British National Formulary (BNF)<sup>4</sup> paragraph 0407020] in the community at various time points in the 18 months prior to a cancer related death. It should be noted that the PIS dataset does not include any indication for prescribing.

We further examined patients and prescribing in the 3 months prior to death. Differences in deprivation, rurality, survival and place of death were examined by cancer type separately using the Pearson chi-square test/Fisher's exact for small numbers to assess any univariate differences. Patients dying outwith the home were excluded as the PIS dataset includes community prescribing only.

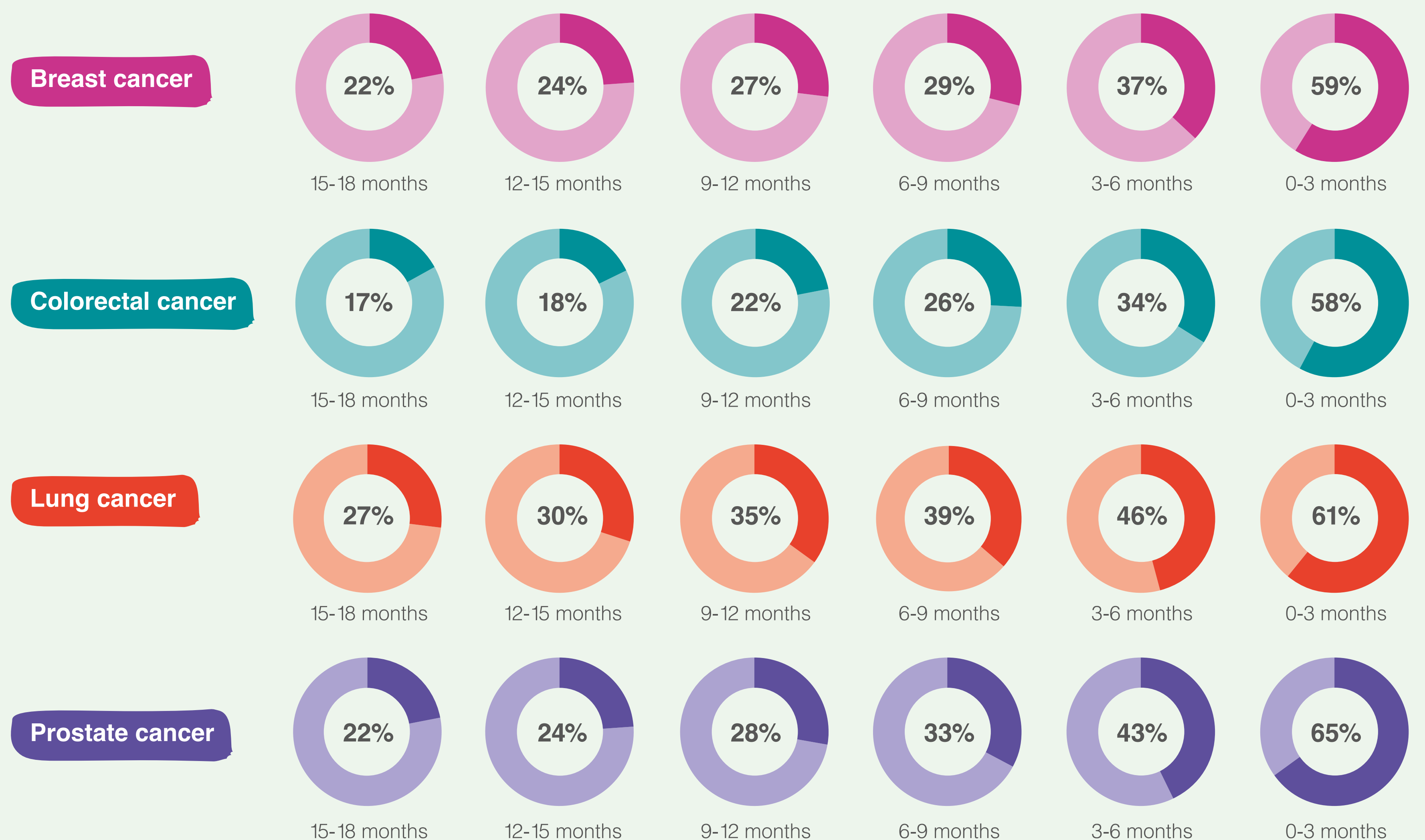
### Results

The percentage of patients prescribed an opioid prior to a cancer death increases across all cancer types towards the end of life (Figure 1).

We explored opioid prescribing in the 3 months prior to a cancer death for patients dying at home only. The proportion of patients prescribed an opioid differed significantly with overall survival time

from diagnosis for lung cancer patients (Table 1). In lung cancer patients surviving for less than 3 months and then dying at home, 78% were prescribed an opioid in the 3 months prior to death, compared to 89% of patients surviving longer than 3 months ( $p < 0.001$ ) (Table 1). No significant differences were found in prescribing by deprivation or rurality for all cancer types (Table 1).

**Figure 1: Proportion of patients prescribed an opioid in the community prior to a cancer related death**



**Table 1: Proportion of patients prescribed an opioid in the 3 months prior to a cancer death at home, by survival time, deprivation category and rurality**

	Breast cancer		Colorectal cancer		Lung cancer		Prostate cancer	
	Prescribed opioid	$\chi^2$	Prescribed opioid	$\chi^2$	Prescribed opioid	$\chi^2$	Prescribed opioid	$\chi^2$
<b>Died &lt;3 months from diagnosis</b>		*		0.372		<0.001		0.968
No	78%		89%		88%		85%	
Yes	100%		85%		78%		86%	
<b>SIMD Deprivation category<sup>5</sup></b>		0.712		0.256		0.342		0.558
1 – Most deprived	80%		86%		84%		82%	
2	82%		88%		84%		86%	
3	76%		88%		85%		87%	
4	75%		91%		88%		82%	
5 – Least deprived	78%		90%		85%		92%	
<b>Urban/rural category<sup>6</sup></b>		0.547		0.428		0.067		0.601
Urban Areas	79%		88%		84%		85%	
Remote Areas	74%		90%		89%		88%	

\* No significance test reported due to zero counts.  
^ Linear-by-linear p-value.

### Conclusion

Initial analysis suggests equitable access to opioid prescribing across geographic locations and deprivation within the community for those who die at home in the three months prior to a cancer death but also suggests shorter survival time may impact opioid prescribing in colorectal and lung cancer patients.

Next steps are to use this data to further explore opioid prescribing by cancer type and survivorship pathway and incorporate these results into our wider Scottish Routes from Diagnosis analysis.

#### Acknowledgements

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#### References

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