Timeliness of Cancer care in Rural Victoria:

A comparison of a High (Lung cancer) and a Low (Oesophagogastric cancer) volume Cancer Stream.

Mwila Kabwe, Amanda Robinson, Yachna Shethia, Ilana Solo, Michael Leach
Loddon Mallee Integrated Cancer Service, Bendigo, VIC 3550, Australia

Aim

To compare variations in timeliness of treatments at a regional hospital for a low-volume cancer type, OG cancer, and a larger volume cancer type, lung cancer, in relation to OCP guidelines.

Method

The patient groups comprised random samples of 75 people newly diagnosed in 2015 with lung cancer (International Classification of Diseases and Related Health Problems-10 [ICD-10] diagnosis codes C34 in the Victorian Cancer Registry [VCR]) and 50 people newly diagnosed over 1/7/2016-31/12/2017 with OG cancer (ICD-10 diagnosis codes C15 or C16 in VCR).

Using hospital systems, we collected inpatient timeliness data from referral to first definitive treatment for lung and OG cancers.

For each cancer type, the proportions of patients meeting optimal timeframes specified in OCP guidelines were calculated and compared using odds ratios and p-values from univariate logistic regression modelling.

Conclusion

Time from referral to diagnosis or to treatment was influenced by the increasing number of comorbidities that reduced the odds of care being within OCP.

Timelines from referral to another time point in care was delayed in a small volume cancer stream (OG) but not in high volume volume (lung) cancer except for time from MDM (Multi-disciplinary meeting) to treatment. Overall, once diagnosed and treatment decision made, time to treat was similar.

This project was funded by Loddon Mallee Integrated Cancer Service. LMICS acknowledges the support of the Victorian Government.

For further information about this poster, please contact Mwila Kabwe — mkabwe@bendigohealth.org.au

Introduction

Optimal care pathways (OCPs) have been developed for different tumour streams as a guide for improving and reducing variation in cancer care[1]. Improved care has been associated with better survival rates[2]. Although no study was found to review timeliness between low and high volume cancer types, high volume centres have been associated with improved treatment outcomes[3].

FIGURE 1

Summary of Lung Cancer Optimal Timeframes Specified in OCP Gudelines

Lung Cancer Optimal Timeframes

Pathway step	*Care point*	*Timeframe*
Presentation and initial investigations and referral	2.2 Initial investigations by GP	Tests results should be provided to the patient with one week. Prior discussion of test results is not critical.
	2.3 Specialist appointment	The specialist appointment should take place within two weeks of initial GP referral.
Diagnosis, staging, treatment and planning	3.3 Treatment planning	Ideally, all newly diagnosed patients should be discussed in a multidisciplinary team meeting before beginning treatment.
Treatment	4.2 Treatment planning	The time from initial referral to initial treatment should be no more than six weeks.

FIGURE 2

Summary of Oesophagogastric Cancer Optimal Timeframes Specified in OCP Guidelines

Oesophagogastric Cancer Optimal Timeframes

Pathway step	*Care point*	*Timeframe*
Presentation and initial investigations and referral	2.1 GP appointment	A patient with concerning (red flag) symptoms should be seen by their GP within two weeks.
	2.2 Referral for endoscopy	Endoscopy completed within two weeks.
	2.3 Specialist appointment	Within two weeks. Imaging / workup as directed by the specialist may precede but should not delay referral.
Diagnosis, staging, treatment and planning	3.1 Diagnosis 3.2 Staging	Workup needs to be complete at MDT within two weeks of diagnosis.
	3.3 Multidisciplinary meeting	Within four weeks of GP referral
Treatment	4.2 Treatment	Within two weeks of MDT discussion.

References
1. Cancer Council Victoria. Optimal Care Pathways. 2018. www.cancervic.org.au/for-health-professionals/optimal-care-pathways
2. Dickman PW & Adami H.O. 2006. *Journal of Internal Medicine.* 2006 Aug; 260 (2):103–17.
3. Smith R.C., Creighton N., Lord RV., Merrett ND., Keogh G.W., Liauw W.S., Currow D.C., *Medical Journal of Australia.* 2014 Apr; 200(7): 408-13

Results

FIGURE 3

Comparing lung and OG cancer patients descriptive charateristics

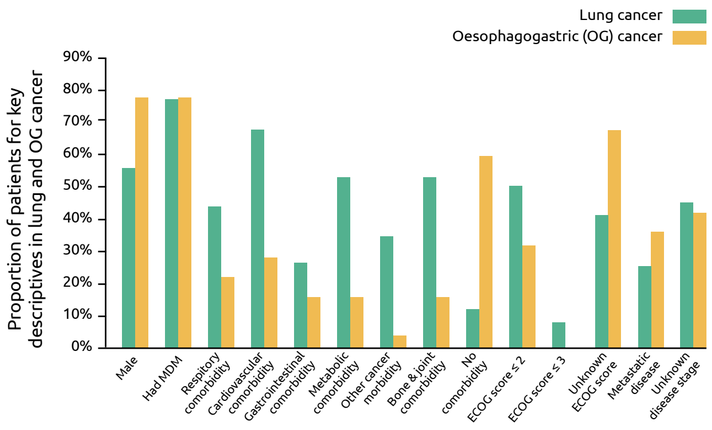

FIGURE 4

Proportion of lung and OG cancer patients with timelines within OCP for each key performance indicator

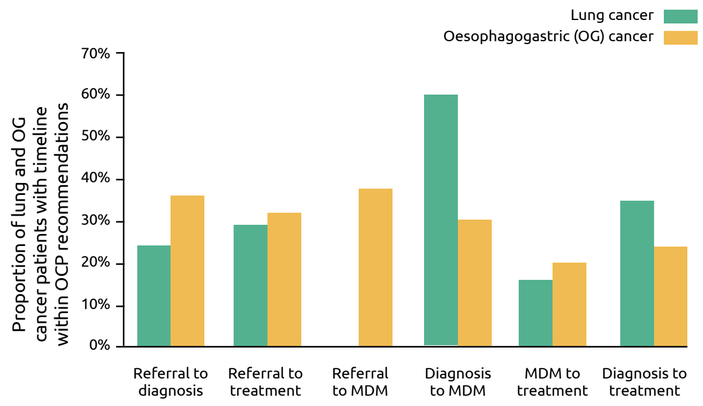

TABLE 1

Univariate analysis of factors associated to having timeliness within OCP recommendations for Lung and OG cancer

	Referral to diagnosis		Diagnosis to treatment		Referral to treatment	
	Odds Ratio (OR)	2-sided p-value	Odds Ratio (OR)	2-sided p-value	Odds Ratio (OR)	2-sided p-value
Age at diagnosis (years)	0.989	0.080	0.997	0.412	0.995	0.111
Residence in CoBG	0.636	0.105	1.143	0.655	0.929	0.786
Male gender	0.813	0.578	0.647	0.261	0.813	0.578
Tumour stream (OG)	0.439	0.004	1.238	0.467	0.647	0.112
Presented at MDM	0.900	0.819	2.000	0.206	1.800	0.292
Respiratory comorbidity	0.697	0.184	1.125	0.675	0.929	0.786
Cardiovascular comorbidity	0.818	0.528	0.636	0.186	1.353	0.355
GIT comorbidity	0.707	0.154	1.000	>0.999	0.943	0.808
Metabolic comorbidity	0.833	0.501	0.857	0.579	1.038	0.891
Other cancer comorbidity	0.865	0.548	0.789	0.333	0.886	0.623
Bone and joint comorbidity	0.638	0.055	1.000	>0.999	0.780	0.293
Any comorbidity	0.535	0.015	0.806	0.424	0.571	0.029
Number of comorbidities	0.898	0.016	0.941	0.167	0.913	0.029
*ECOG three or more	0.200	0.094	1.600	0.620	1.263	0.804
**Stage I	0.143	0.069	0.750	0.706	0.286	0.118
**Stage II	0.250	0.080	0.800	0.739	0.001	0.999
**Stage III	0.600	0.484	0.375	0.147	1.500	0.530

CoGB - City of Greater Bendigo; MDM — Multi-Disciplinary Meeting; OG — Oesophagogastric

FIGURE 5

Mean periods between key performance indicators of timely care