SELF-EVALUATION AND CONTINUOUS IMPROVEMENT

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Peter MacCallum Cancer Centre
Victoria Australia

The Royal Melbourne Hospital

The University of Melbourne

the women's
the royal women's hospital

WEHI
brighter together

VCCC Alliance
Overcoming cancer together

The Royal Children's Hospital Melbourne

Western Health

St Vincent's Hospital Melbourne

Austin Health

murdoch children's research institute

DISCLOSURES

Grant McArthur

- Research Funding
  - Bristol-Myers Squibb Australia (Inst)
  - Genentech/Roche (Inst)
  - MSD (Inst)

- Uncompensated Relationships
  - Bristol-Myers Squibb Australia
  - Novartis Australia

OUTLINE OF TALK

- Key Network Structures in Victoria
- Optimal Care Summits
- Evaluating Research
- The Victorian COVID-19 Cancer Network

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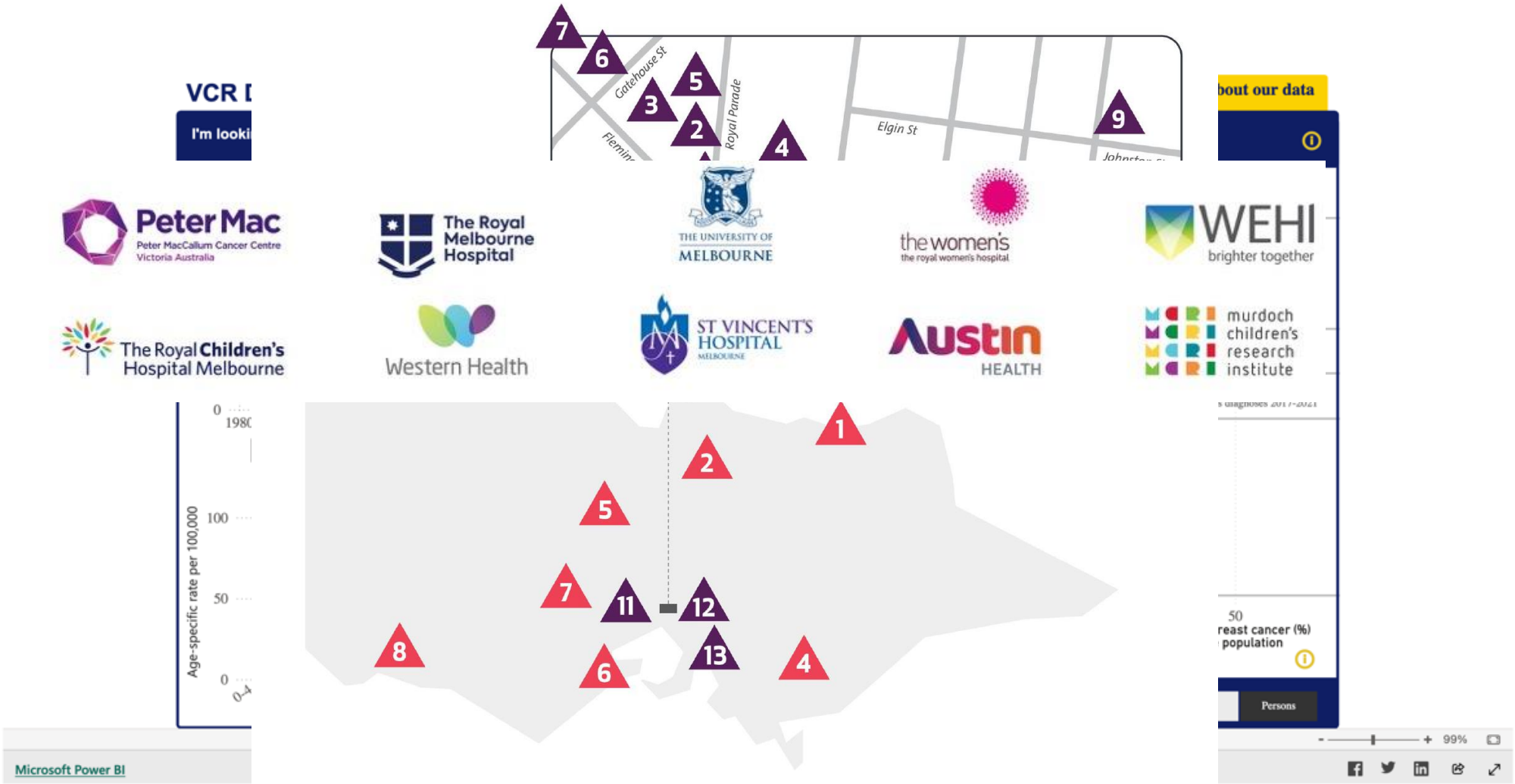
KEY NETWORK STRUCTURES IN VICTORIA



OUTLINE OF TALK

- Key Network Structures in Victoria
- **Optimal Care Summits**
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OPTIMAL CARE SUMMITS

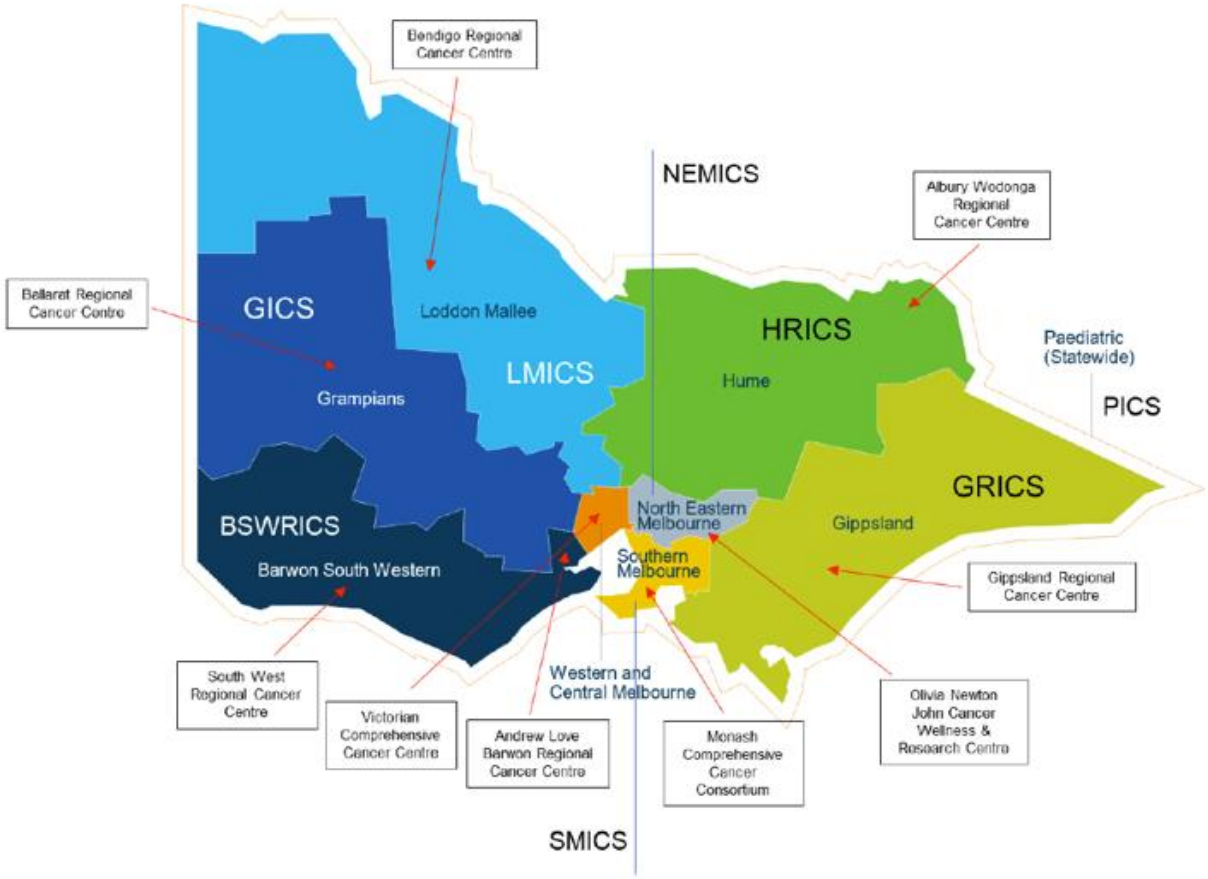
- Support the implementation of Optimal Care Pathways (OCPs).
- Statewide data are provided for benchmarking against OCP guidelines and between different geographic regions in the state
- Led by Optimal care working groups that comprise cancer multidisciplinary clinical leaders from multiple Integrated Cancer Services

OPTIMAL CARE SUMMITS

- Sup athways (OC
- Stat against OCP guic egions in the stat
- Led by Optimal care working groups that comprise cancer multidisciplinary clinical leaders from multiple Integrated Cancer Services

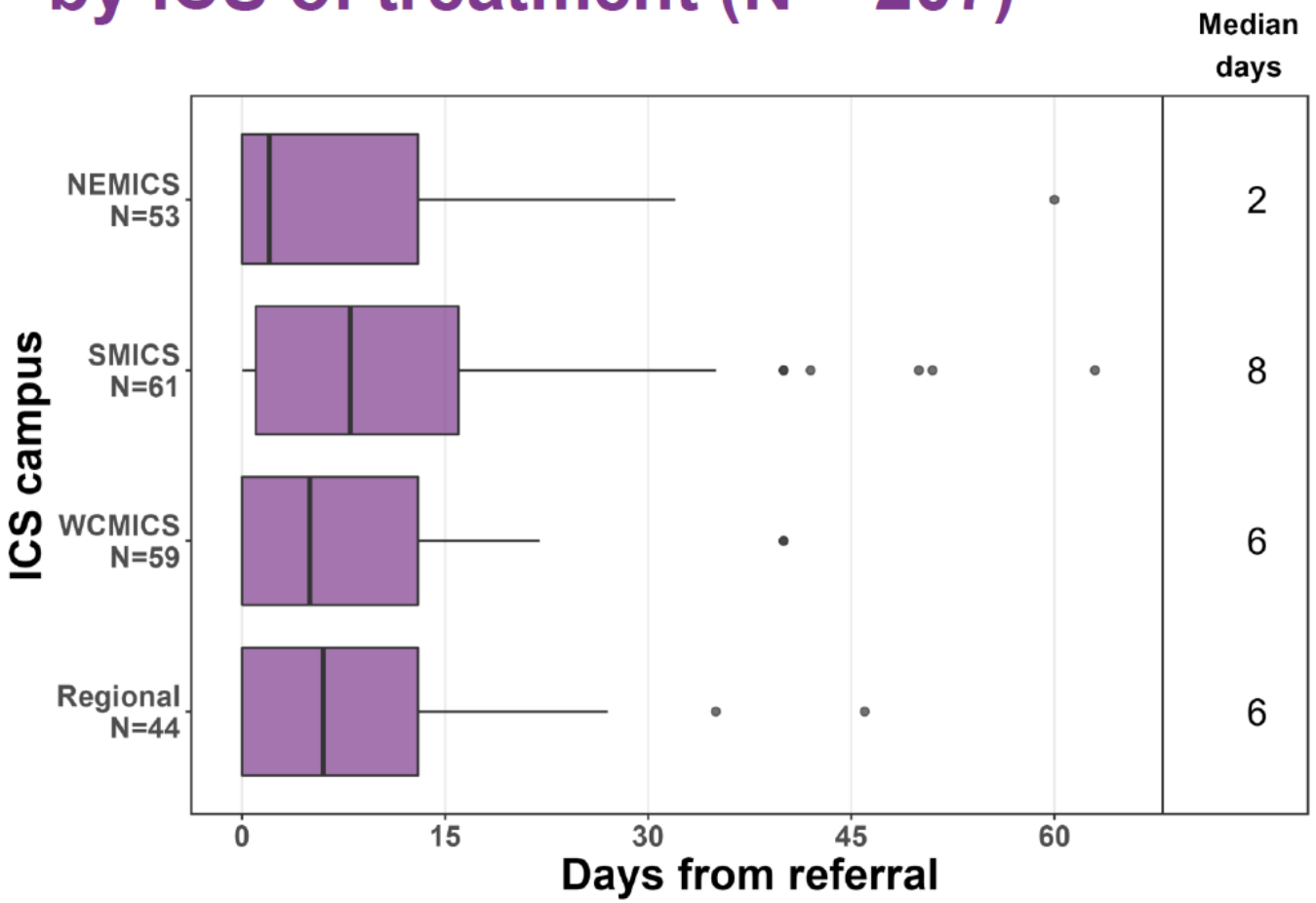
OPTIMAL CARE SUMMITS

Integrated Cancer Services and Cancer Centres



Pancreatic Cancer Optimal Care Pathway (OCP)

Time from referral to date first seen at health service, by ICS of treatment (N = 207)



Overall median: 6 days
Max: 310 days

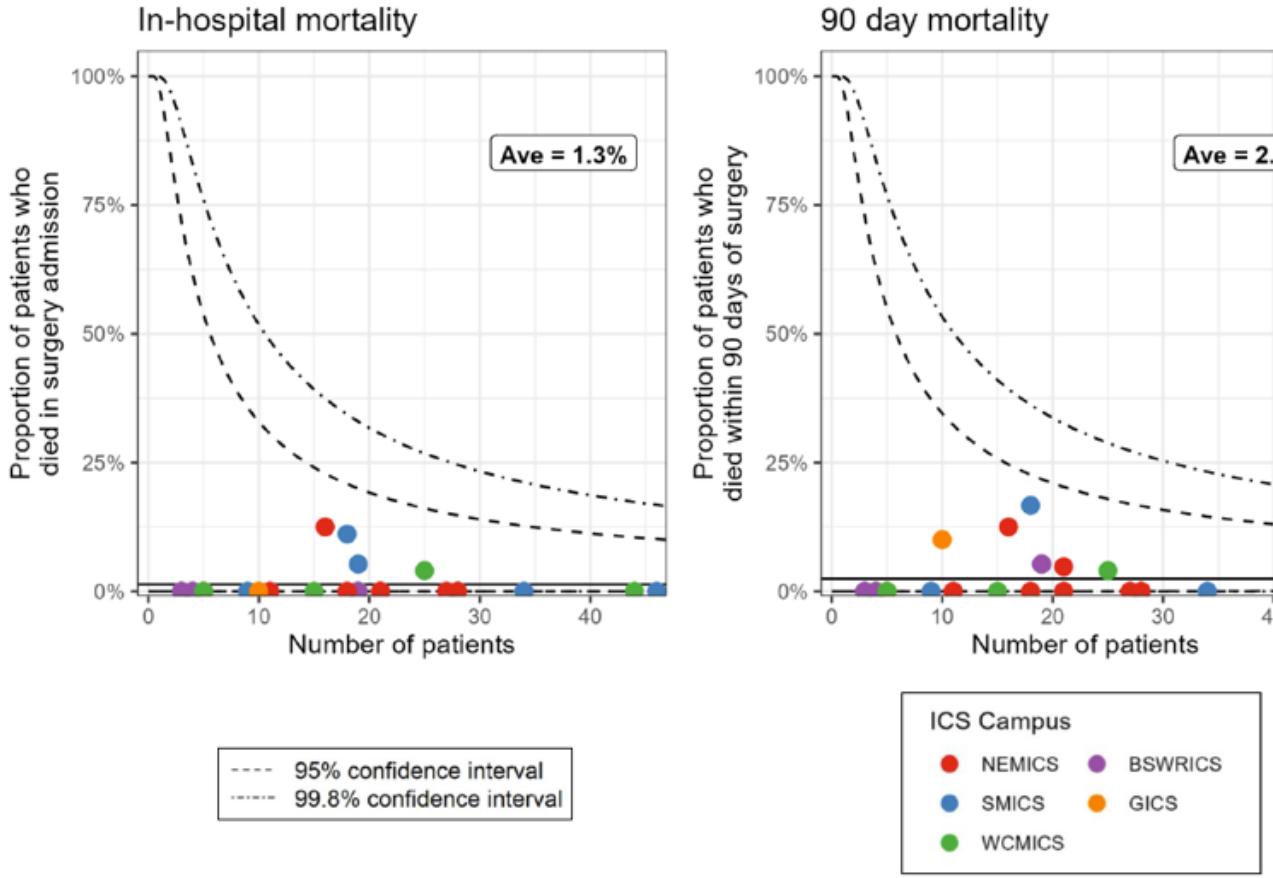
Patients are assigned to the health service where they received their **first treatment.**

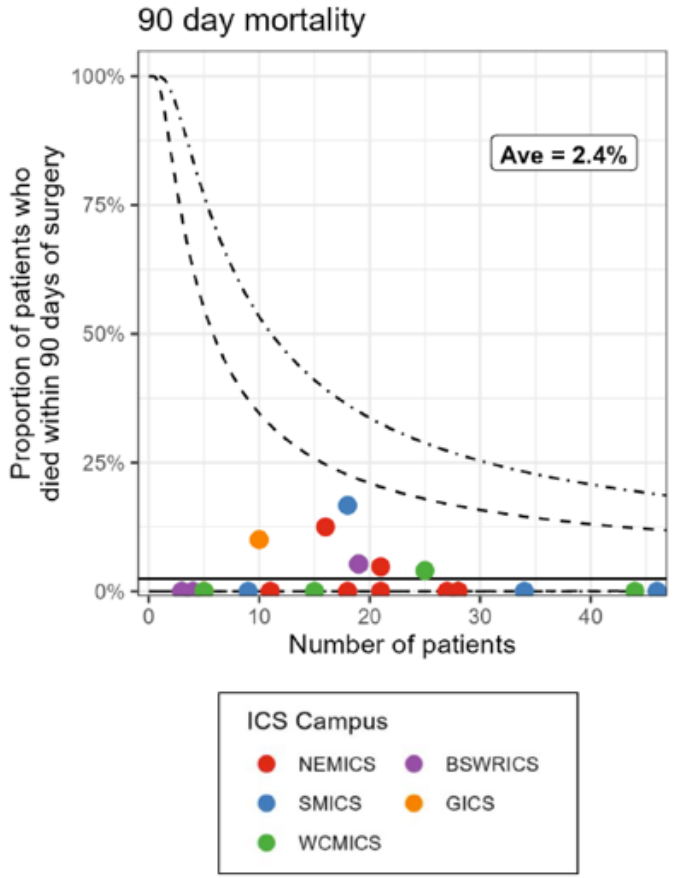
Some regional patients will be audited at a metro ICS health service.

Patients referred from ED excluded.

Source: Cancer Services Performance Indicator (CSPI) Audit 2020; All pancreatic cancer types
Excluded: Referral source = "Emergency department" and negative time from referral to first seen.

No variation in post-surgical mortality by hospital (N = 453)





	2011-2015 N = 417 % (n)	2016-2020 N = 453 % (n)
Died < 30 days	3% (11)	2% (7)
Died < 90 days	4% (15)	2% (11)
Died < one year	26% (109)	19% (86)
Survived ≥ one year	74% (308)	81% (366)

Source: VCR, VAED (2016-2019); PDAC only; Most recent surgery. * HRICS excluded due to data limitations

Time to treatment for non-metastatic PDAC patients

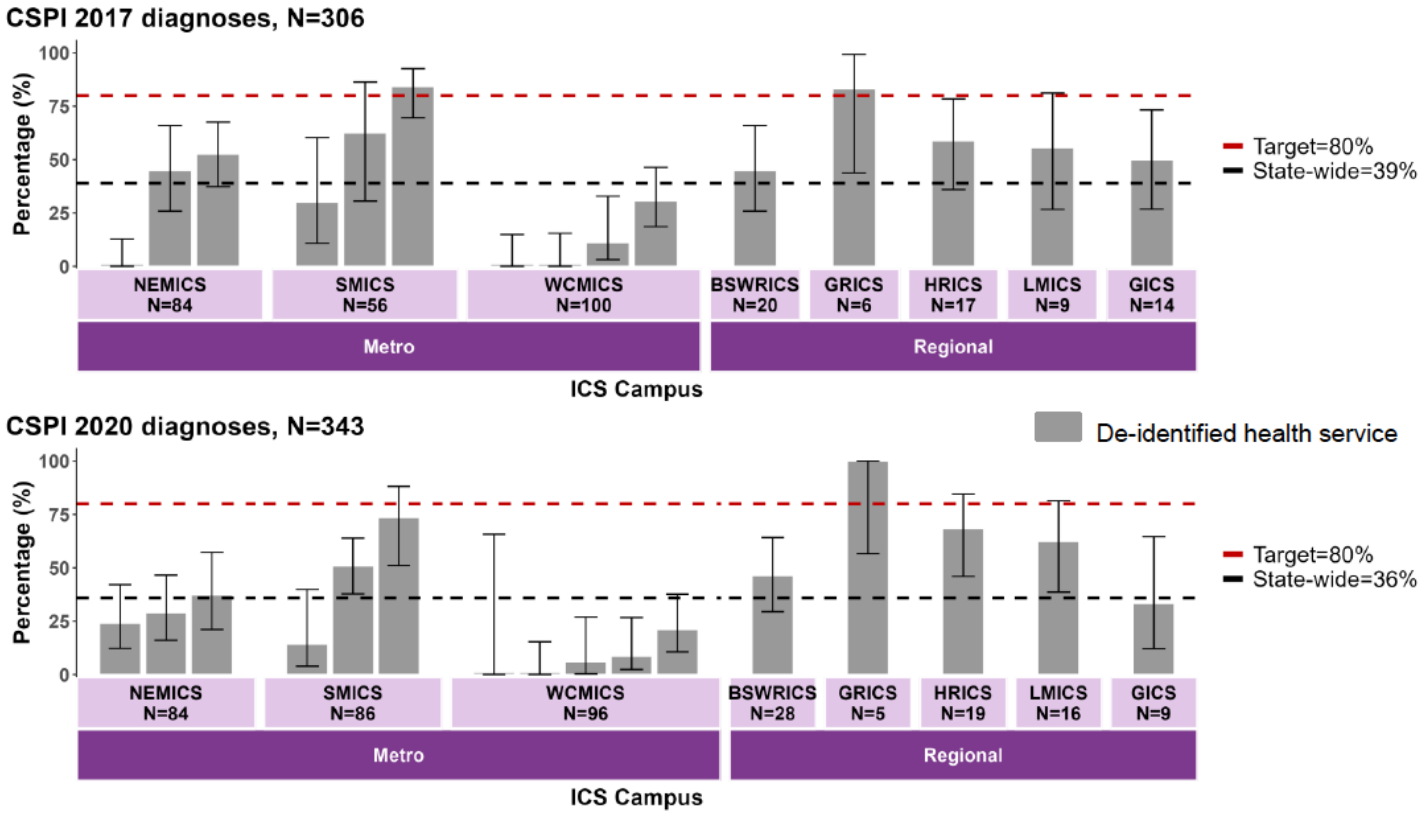
Optimal Care Pathway indicates initial treatment should begin within 4 weeks of initial diagnosis

From	To (earliest tx)	2011-2015 (N = 1,411)			2016-2019 (N = 1,445)		
		N	Time (days) Median [IQR]	Treated within 28 days N (%)	N	Time (days) Median [IQR]	Treated within 28 days N (%)
VCR diagnosis	Neoadjuvant chemotherapy	15	22 (14-36.5)	11 (73%)	66	25 (15.25-35)	39 (59%)
VCR diagnosis	Chemotherapy and/or radiation only	401	35 (16-67)	165 (41%)	424	34 (20-58)	174 (41%)
VCR diagnosis	Surgery (excl. same day)	166	21 (12-32.75)	108 (65%)	183	24 (15-36)	109 (60%)
VCR diagnosis	Surgery (inc. same day)	323	4 (0-22)	265 (82%)	350	3 (0-25.75)	276 (79%)
Chemotherapy	Surgery	15	127 (86.5-171)		66	118 (103.25-166)	
Surgery	Chemotherapy or chemoradiation	259	55 (46-70)		318	57.5 (47-71.75)	

Source: VCR, VAED, VRMDS (2011-2019)

Decrease in supportive care screening over time

A validated supportive care screening tool must be used i.e. NCCN Distress Thermometer and problem checklist.



Patients are assigned to the health service where they received their **first treatment.**

Some regional patients will be audited at a metro ICS health service.

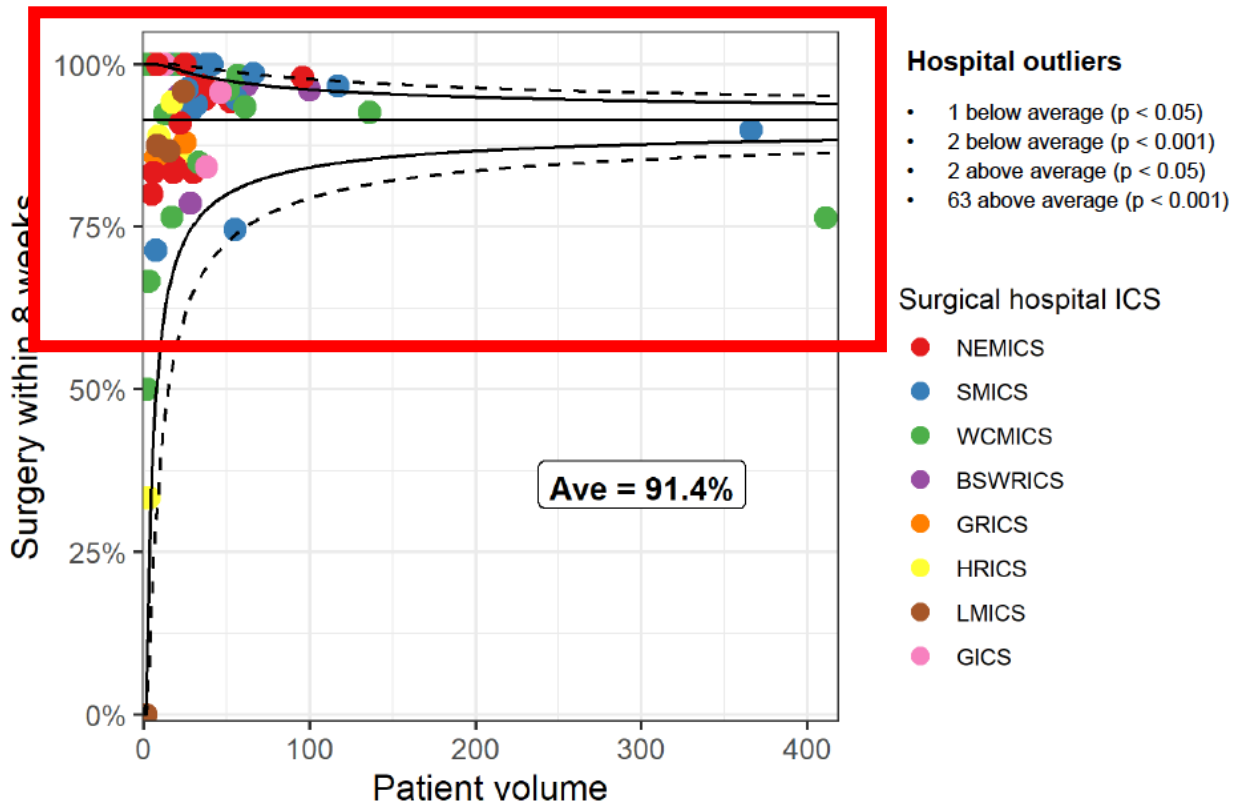
Source: Cancer Services Performance Indicator (CSPI) Audit 2017 and 2020; All pancreatic cancer types
Please note low patient numbers at regional campuses

Melanoma Optimal Care Pathway (OCP)

- Prevention and early detection
- Presentation, initial investigations and referral
- Diagnosis, staging and treatment planning
- Treatment
- Care after initial treatment and recovery
- Managing recurrent , residual and metastatic disease
- End-of-life care

Admitted surgery within 8 weeks of stage I-III melanoma diagnosis by hospital, 2018-2019 (N = 3,123)

Surgery within 8 weeks by hospital



Surgery within 8 weeks by hospital type

Hospital type	Admitted surgery within: n (% row)	
	4 wks	8 wks
Public, N = 1,488	476 (32%)	1,274 (86%)
Private, N = 1,635	1,236 (76%)	1,581 (97%)
Victoria	1,712 (55%)	2,855 (91%)

	Above Victorian average - **P < 0.05**
	Below Victorian average - **P < 0.05**

Source: VCR, VAED 2018-20. Restricted to those treated with surgery within 90 days of diagnosis; *HRICS data limitation – missing data from Albury Wodonga Health – Albury campus

Patient flow for stage I-III melanoma sentinel lymph node biopsy, 2018-2019 (N = 1,144)

ICS of treatment	ICS of residence N (column %)							
	NEMICS	SMICS	WCMICS	BSWRICS	GRICS	HRICS*	LMICS	GICS
NEMICS	86 (35%)		12 (7%)			8 (11%)		
SMICS	44 (18%)	220 (69%)	37 (22%)	15 (12%)	25 (27%)	10 (14%)	10 (13%)	9 (13%)
WCMICS	114 (47%)	90 (28%)	123 (72%)	17 (13%)	50 (53%)	42 (57%)	37 (49%)	21 (31%)
BSWRICS				93 (73%)				
GRICS					14 (15%)			
HRICS*						12 (16%)		
LMICS							21 (28%)	
GICS								34 (50%)
Victoria	244	310	172	125	89	72	68	64

51% of patients had a sentinel lymph node biopsy locally

Source: VCR, VAED 2018-20; *HRICS data limitation – missing data from Albury Wodonga Health – Albury campus; Cells with <10 removed (n=29)

Patient flow for stage I-III breast cancer sentinel lymph node biopsy, 2018-2019 (N = 6,268)

ICS of treatment	ICS of residence N (column %)							
	NEMICS	SMICS	WCMICS	BSWRICS	GRICS	HRICS*	LMICS	GICS
NEMICS	1081 (68%)	57 (3%)	87 (8%)			54 (17%)		
SMICS	141 (9%)	1482 (83%)	28 (2%)		88 (24%)		10 (3%)	
WCMICS	360 (23%)	242 (14%)	1036 (90%)	16 (3%)	59 (16%)	123 (40%)	95 (27%)	45 (15%)
BSWRICS				443 (96%)				12 (4%)
GRICS					207 (57%)			
HRICS*						126 (41%)		
LMICS							220 (62%)	
GICS							18 (5%)	239 (78%)
Victoria	1582	1781	1151	459	354	303	342	296

76% of patients had a sentinel lymph node biopsy locally

Source: VCR, VAED 2018-20; *HRICS data limitation – missing data from Albury Wodonga Health – Albury campus; Cells with <10 removed (n=51)

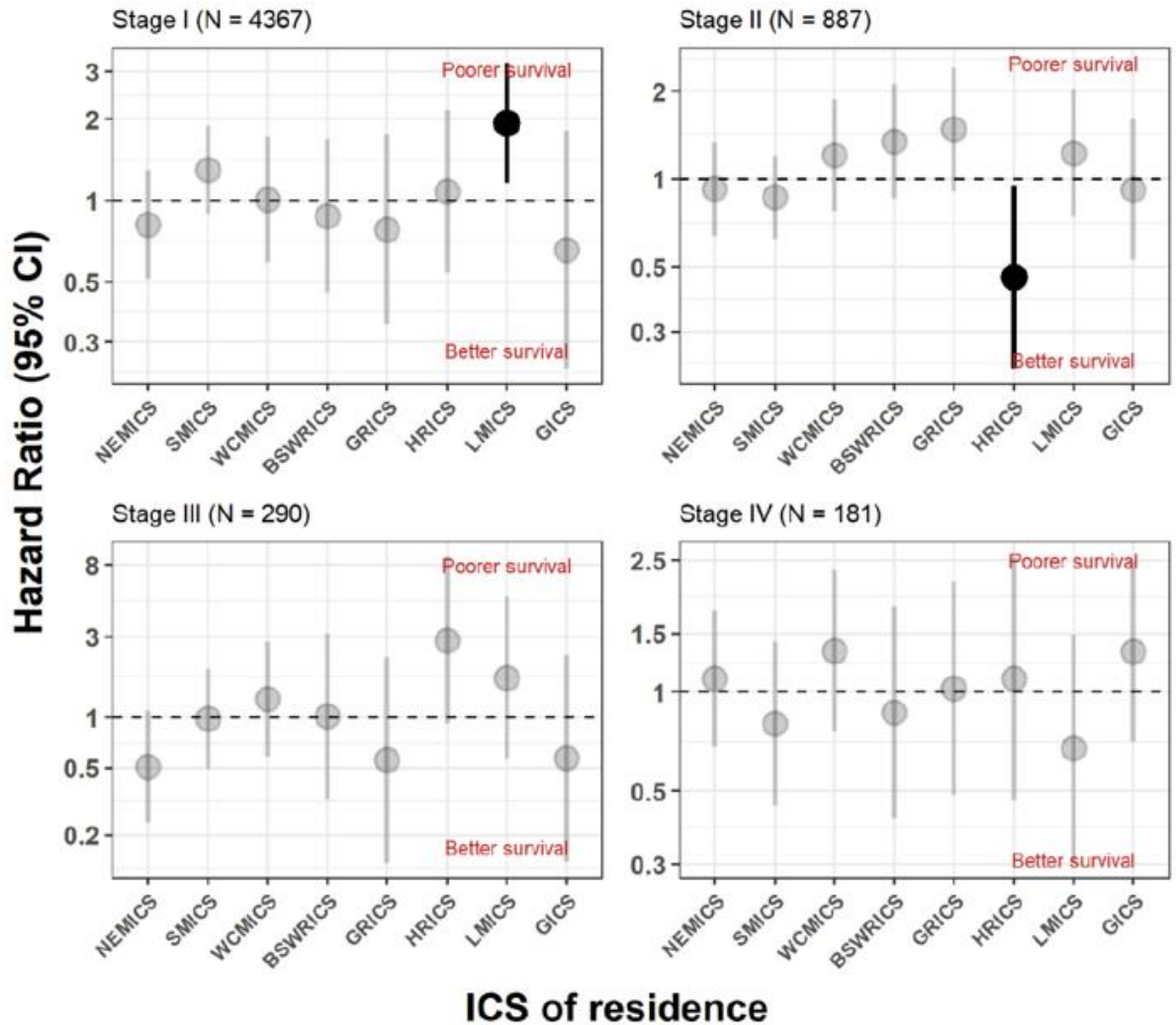
5 year survival by melanoma stage and ICS of residence

Models adjusted for age, sex and comorbidities

Stage I
Significantly poorer survival in LMICS

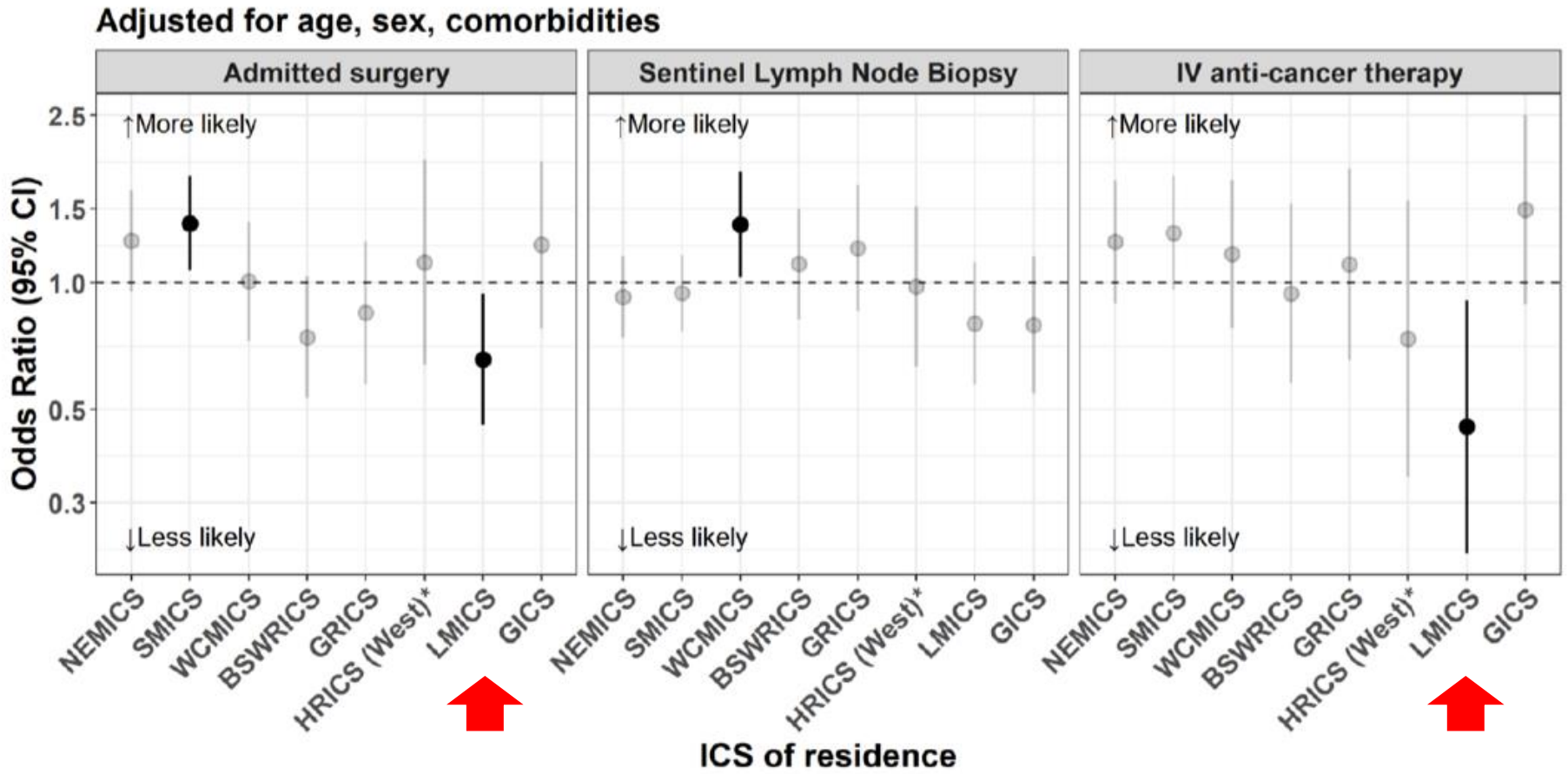
Stage II
Significantly better survival in HRICS

Stage III and Stage IV
No significant difference between ICS



Source: VCR, VAED 2018-20; ICS – Integrated Cancer Service; HRICS data limitation

Odds of treatment within 1 year of ≥1mm melanoma diagnosis, 2018-2019 (N = 1,854)



Source: VCR 2018-19, VAED 2018-20, VRMDS 2018-20;
Stage I, II and III patients only; *HRICS data limitation - Patients who live in HRICS Border East excluded due to missing treatment data (n = 74)

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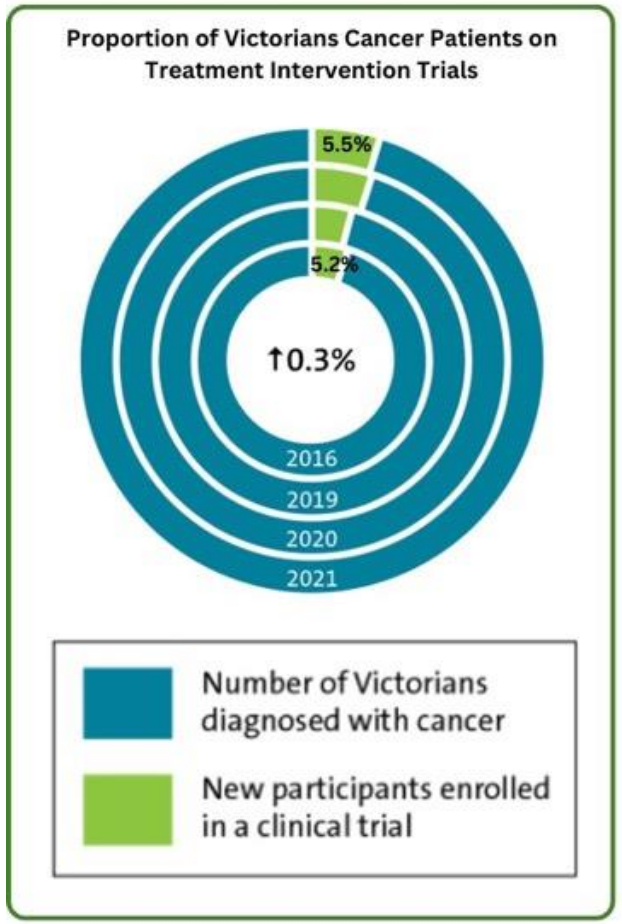
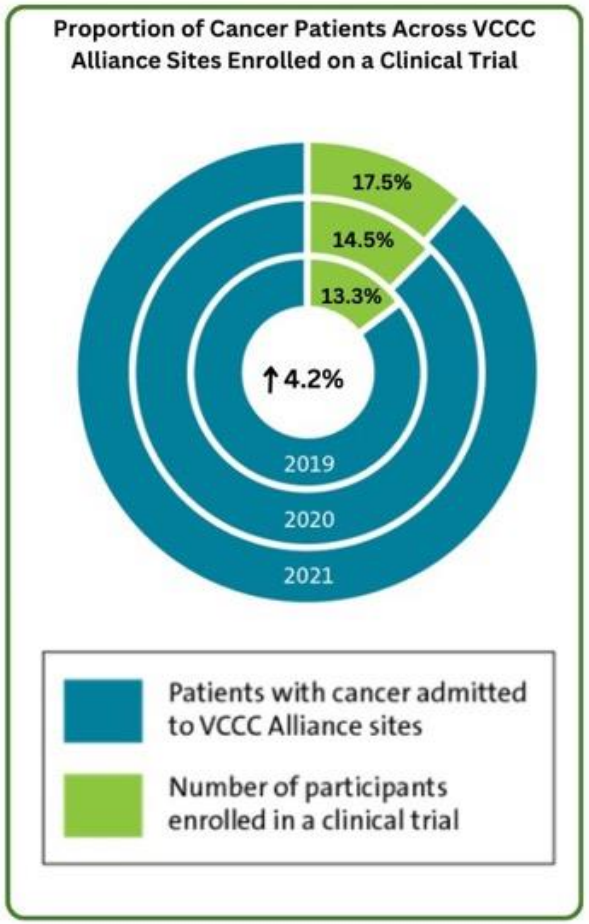
CLINICAL TRIAL PARTICIPATION



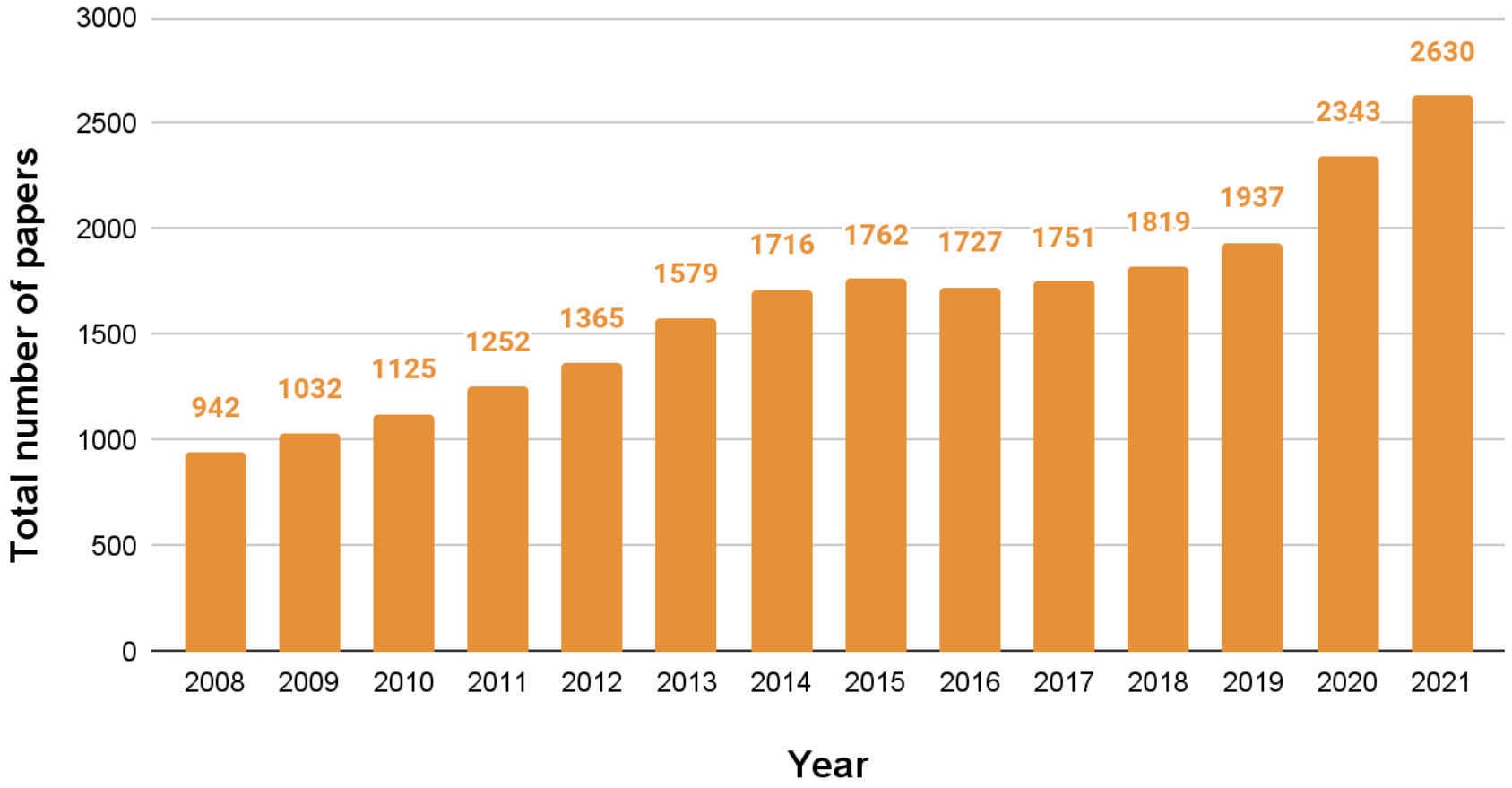


RESEARCH IMPACT - CITATIONS

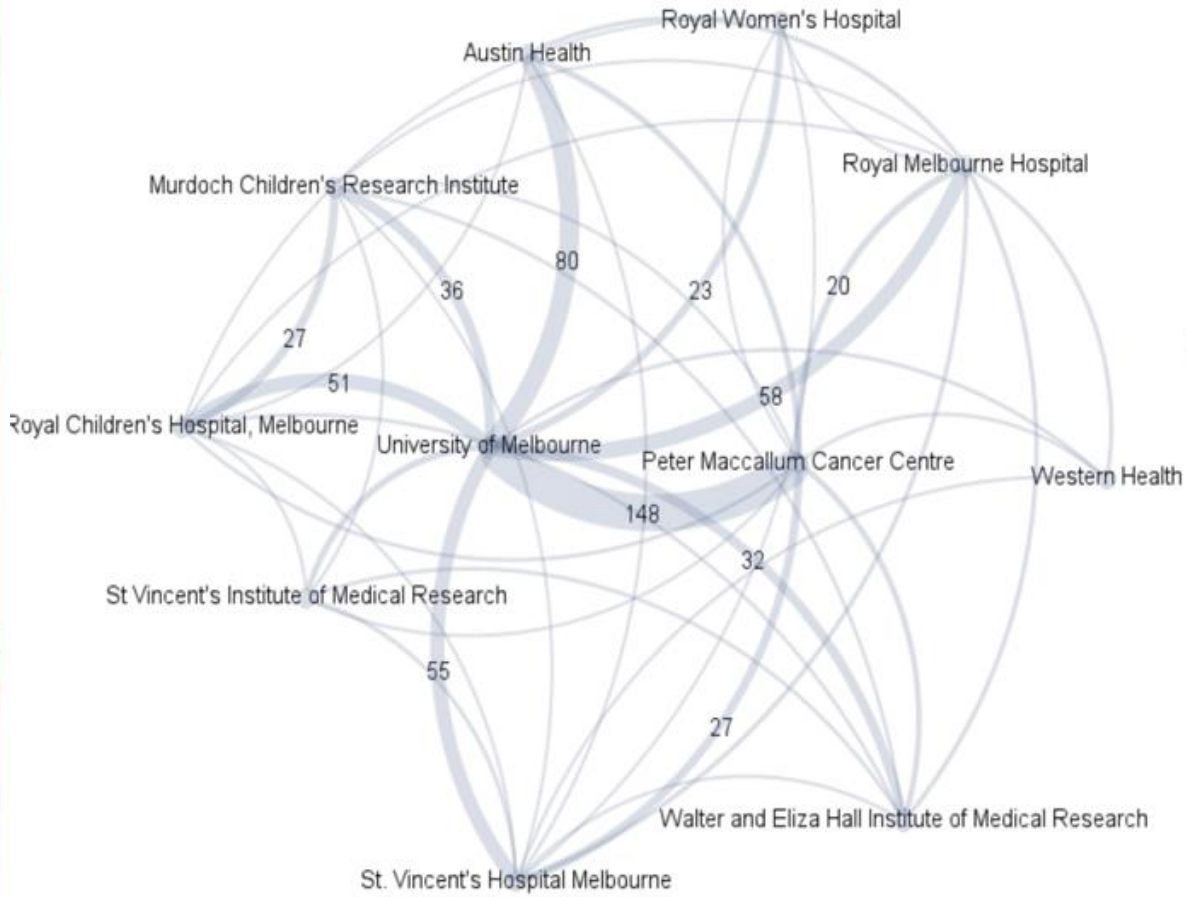
AREA	Indicators	Definition	Source	Targets				Tracking and progress				
				G	A	R	Target 2022	Past measure/s	June 2019	June 2020	June 2021	June 2022
RESEARCH	International influence of VCCC Alliance published research	2018 relative citation index (RCI) for VCCC Alliance publications. The comparator is the world average for the field that is defined as 1.0	Scopus and SciVal	>2.5	2.5 - 2.0	<2.0	>2.5 (1 year impact)	Measured in 2011. 3 year impact- 2008= 1.92 1 year impact- 2008= 2.08	1 year impact- 2018= 2.89 3 year impact- 2015= 3.0	1 year impact- 2019 = 2.5 3 year impact 2016 = 3.01	1 year impact- 2020 = 2.1 3 year impact 2017 = 2.92	1 year impact 2021 = 1.88 3 year impact 2018 = 2.80

RESEARCH IMPACT - CITATIONS

Figure 1: VCCC Alliance total number of cancer-related research papers published by year from 2008 to 2021

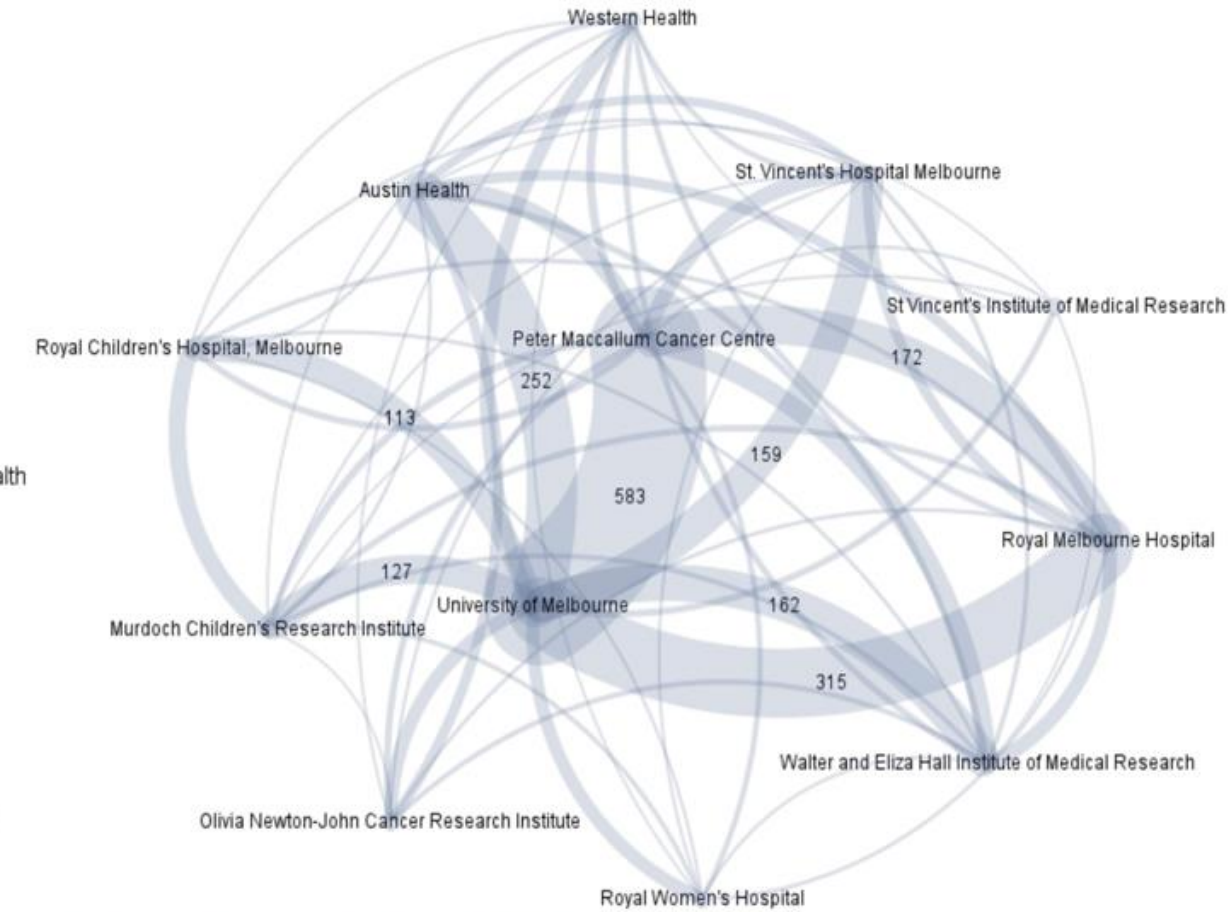


VCCC Alliance co-authorship network, **all cancer types**, 2009



Total no of co-authorships: **690**

VCCC Alliance co-authorship network, **all cancer types**, 2022



Total no of co-authorships: **2975**

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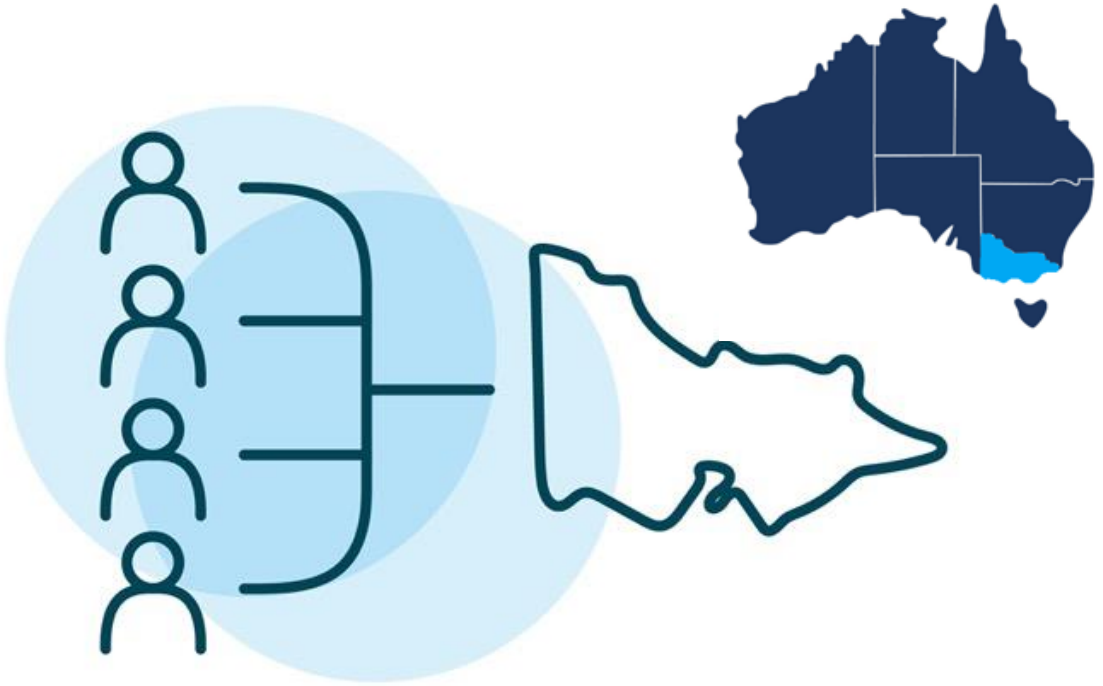
THE VICTORIAN COVID-19 CANCER NETWORK

Established March 2020

Inclusive, integrated, statewide cancer sector response to the pandemic



THE VICTORIAN COVID-19 CANCER NETWORK

Empower

Support

Provide patients and carers with a platform

THE VICTORIAN COVID-19 CANCER NETWORK

Collaborators

VCCC Alliance — Overcoming cancer together

MPCCC — Monash Partners Comprehensive Cancer Consortium

VICS — Victorian Integrated Cancer Services

Cancer Council

Taskforce

4 chairs

18 expert groups

22 members multiple disciplines/interests

Consumer involvement, state government support, Australian government connections, Victorian Cancer registry data

Network

800 members

150 organisations

Communication information guidance, education, advocacy

ACTIVITIES

Contemporaneous considerations

Researching barriers

Targeted campaigns

Advocacy

Shared strategies

Surge planning

Workforce wellbeing

OUTPUTS

- COVID19 impact on cancer pathology notifications and delayed diagnoses
- Targeted public health campaigns
- Shared clinical service strategies
- Strategies for workforce wellbeing

Research Letter

Decline in cancer pathology notifications during the 2020 COVID-19-related restrictions in Victoria

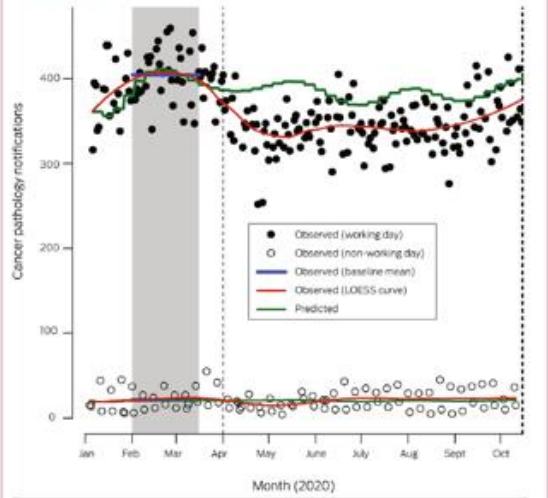
Luc te Marvelde[1], Rory Wolfe[2], Grant McArthur[3], Louis A Blake[1], Sue M Evans[1,2]

Medicare Benefits Schedule (MBS) data indicated that there were 37% fewer screening procedures for breast cancers and 55% fewer for colorectal cancers in April than in March 2020.[1] We examined the temporal relationship between coronavirus disease 2019 (COVID-19)-related restrictions in Victoria during 1 April – 15 October 2020 and cancer pathology notifications to the Victorian Cancer Registry (VCR), to estimate their impact on cancer diagnoses

Victorian legislation requires pathology services to notify reportable cancer diagnoses to the VCR.[2] The E-Path system, installed in all Victorian pathology services during 2013–2018,[3] automatically transmits notifications to the VCR together with pathologist report authorisations. During 2019, 97 313 of 104 025 cancer pathology notifications to the VCR (94%) were received via E-Path (data supplied by author LB). Changes to the E-Path system during 2019 meant that we were unable to directly compare notification numbers for 2019 and 2020.

We therefore modelled cancer incidence during 2014–2018 by Poisson regression. A spline function was fitted to VCR cancer incidence data for weeks 1–52, adjusted for day type (working or non-working day/public holiday) and year, and the fitted curve used to predict daily incidence during 7 January – 15 October 2020. Predicted incidence was re-scaled to estimate expected notification numbers; the scale factor was the number of notifications during the baseline period — 1 February – 16 March 2020, allowing a two-week washout period before restrictions were formally announced — divided by the predicted incidence during this period. Observed and predicted notification numbers were compared using Poisson regression, with the expected number as an offset term, enabling estimation of relative reductions with 95% confidence intervals (CIs). Differences between predicted and actual notification numbers were estimated, both overall and for specific groups (eg, by tumour or age group), based on the pertinent incidence data. As a

1 Cancer pathology notifications to the Victorian Cancer Registry, January–October 2020: observed (red) and predicted numbers (green), by day type



LOESS = locally estimated scatterplot smoothing. The grey area marks the baseline period, the vertical dotted lines the analysis period for predicted notifications. A state of emergency was declared in Victoria on 16 March 2020. Stage 3 movement restrictions were applied from 30 March, eased on 13 May, and re-applied from 8 July. The state of emergency was renewed on 2 August, together with application of stage 4 restrictions to metropolitan Melbourne until their easing from 19 October. For further details, see the footnote to figure 2 in the online Supporting Information.

During 1 April – 15 October 2020, there were 5446 fewer notifications of new cancer diagnoses than predicted by our primary model (predicted, 54 609 *v* observed, 49 163; relative reduction, −10.0%; 95% CI, −10.8% to −9.2%) (Supporting Information, figure 1); we estimated that there were 2530 undiagnosed cancers (95% CI, 2327–2731). The relative reduction was greatest during 1 April

te Malverde, *Med J Aus*, 2021

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- Victoria Mar/Phil Parente
- Zee Wan Wong
- Andrew Haydon
- Sue-Anne McLachlan
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