

# Improving recruitment to clinical trials for regional and rural cancer patients through a regionally based clinical trials network

A new clinical trials network aims to bridge the gap in cancer outcomes between rural and metropolitan cancer patients in Victoria

In general, regional and rural patients have poorer cancer outcomes compared with their city counterparts.<sup>1</sup> Although one-third of the Australian population live in rural and regional areas, there is ongoing inequity in access to care among regional Australians.<sup>2</sup> Over the decade to 2010, the disparity in cancer outcomes between rural and urban patients remained unchanged with 7% excess mortality (equating to about 9000 additional rural deaths).<sup>3,4</sup> Until recently, clinical trials were almost exclusively conducted in metropolitan health institutions. Although a gateway to new treatments that can result in improved survival, clinical trials may be out of reach for many regional and rural cancer patients owing to distance.<sup>2,5-10</sup> In 2016, the rate of cancer trial participation was 6.7% in metropolitan Melbourne, but only 1.2% in regional Victoria.<sup>4</sup> In that year, a total of 443 patients from regional Victoria accessed clinical cancer trials, but 343 of those regional patients travelled to Melbourne to access a trial.<sup>4</sup> We postulate that low rates of trial participation may be a contributing factor to lower cancer 5-year survival in regional Victoria (66% compared with 70% in metropolitan Melbourne).<sup>4</sup>

## Establishment of the Regional Trials Network Victoria

Cancer Council Victoria funded the implementation of the Regional Trials Network Victoria (RTNV), which services about 1.4 million people in regional Victoria, serving the needs of over 7200 new patients diagnosed with cancer each year. This region accounts for about 300 excess deaths per annum attributable to cancer in regional and rural Victoria. The RTNV comprises Border Medical Oncology (Albury–Wodonga), Barwon Health (Geelong), Goulburn Valley Health (Shepparton), Bendigo Health, Ballarat Health Services, South West Healthcare (Warrnambool), and network partner Cancer Trials Australia.

The RTNV, in partnership with Cancer Trials Australia, aims to:

- improve patient access and recruitment to high quality cancer clinical trials;
- increase the number of available cancer trials;
- increase participation rates;
- reduce duplication of effort; and
- improve the efficiency of clinical trial implementation in regional Victoria.

The RTNV achieves this by providing connection, capability and capacity building, marketing, shared

research focus, strategic planning, and governance and ethics support. The RTNV provides ongoing assistance with standardisation of operational procedures and work practices to ensure uniformity across all sites.

## Outcomes

A site mapping exercise was conducted to gain an understanding of the capability of each site. A shared document platform (SiteDocs) was implemented.<sup>11</sup> Velos,<sup>12</sup> the clinical trial management system of Cancer Trials Australia, has now been implemented across the regional trials network. The RTNV is now a recognised entity among sponsors and collaborative groups. Its marketing strategy includes promotional brochures, websites and regular communication with clinical trials sponsors. A skills audit was conducted to identify and address gaps in the knowledge of clinical and administrative staff at the regional sites. As part of strategic planning and project governance, engagement of all stakeholders occurred via a combination of face-to-face meetings and videoconferencing using telehealth equipment. Common standard operating procedures and policies are now in place across all sites.

Clinical trial metrics are provided in the [Box](#), which shows a substantial increase in trial feasibilities received, studies opened, and patients recruited. It is too early to expect an impact on cancer survival outcomes.

In 2019, the Victorian Comprehensive Cancer Centre (VCCC) provided funding for staff training and to assist in the implementation of teletrials using the Clinical Oncology Society of Australia's national model,<sup>13,14</sup> and the development of the VCCC teletrials toolkit.<sup>15</sup> These frameworks discuss the governance and operational solutions to enable the conduct of a broad range of trials across networks using telehealth. As of April 2021, five teletrials have been implemented and several others are in the start-up phase. The first trial, conducted between Peter MacCallum Cancer Centre and two RTNV sites, has expanded to include two more sites and one subregional site. This trial to date has recruited 142 regional patients with recruitment almost completed.

The establishment of this project, enabled by project funding (Cancer Council Victoria and the Victorian Cancer Agency), was driven by regional lead clinicians and research staff (clinical champions), connected by information technology systems, and supported by partnerships with a leading national trials organisation (Clinical Trials Australia) and the VCCC for the implementation of teletrials. Telehealth

Arun Muthusamy<sup>1</sup>

Donna Long<sup>2</sup>

Craig R Underhill<sup>1,3</sup>



<sup>1</sup> Border Medical Oncology, Albury, NSW.

<sup>2</sup> Regional Trials Network Victoria, Albury, NSW.

<sup>3</sup> Rural Clinical School, UNSW, Albury, NSW.

craig.underhill@bordermedonc.com.au

**Trial metrics across the Regional Trials Network Victoria (RTNV), 2017–2019**

Year	Health service	Recruiting trials*	New trials†	Patients recruited*	Patients recruited†	Feasibilities received by entire RTNV†
2017‡	Ballarat Health Services	7		20		
	Bendigo Health	4		11		
	Border Medical Oncology	16		27		
	Goulburn Valley Health	2		4		
	Barwon Health	22		49		
	South West Healthcare	4		24		
	Total	55		135		
2018	Ballarat Health Services	7	13	29	22	
	Bendigo Health	7	4	32	40	
	Border Medical Oncology	15	18	38	124	
	Goulburn Valley Health	3	2	7	7	
	Barwon Health	22	12	55	131	
	South West Healthcare	5	2	16	17	
	Total	59	51	177	341	229
2019	Ballarat Health Services	19	11	34	43	
	Bendigo Health	11	6	36	89	
	Border Medical Oncology	19	24	59	104	
	Goulburn Valley Health	7	5	15	15	
	Barwon Health	28	0 <sup>§</sup>	46	46	
	South West Healthcare	6	7	11	16	
	Total	90 (63% increase)	53	201 (49% increase)	313	240

\* Cancer Council Victoria data — do not include registry trials, observational studies, biobanking studies, studies involving deceased patients, psychosocial/psychoncology trials, questionnaire studies, early detection studies, imaging studies for early detection, extension studies, cancer prevention trials, aetiology studies or biomarker studies. † RTNV data — new trials and feasibilities received at RTNV sites were not collected in 2017. ‡ 2017 data are pre-RTNV. § Barwon Health put a hold on new trials opening in 2019 owing to resourcing issues and an information technology security breach at the site. ◆

was a key enabler for recruiting patients to clinical trials. A number of barriers were overcome, including insufficient staff capacity, lack of data sharing and harmonised operational procedures, and an inability to market the sites to trial sponsors. As well as recruiting more patients to clinical trials closer to home, it has helped upskill regional staff and has improved the quality of clinical trial processes.

### Conclusion

The establishment of the RTNV offers an exciting opportunity for regional medical oncologists and other stakeholders to offer cutting-edge cancer treatments to regional and rural patients. This may be the first regionally based clinical trials network in Australia. It is scalable and serves as a template for establishing networks (cancer and non-cancer) in other jurisdictions across Australia and in other geographically dispersed countries.

In October 2020, the RTNV received funding via the Australian Government’s Medical Research Future Fund for the Regional Victorian Trials Alliance, Linkages, Special populations, Equity (ReViTALISE) Program (<https://www.health.gov.au/initiatives-and-programs/>

[national-critical-research-infrastructure-initiative](#)). This program involves two additional clinical research sites in regional Victoria and partners with metropolitan specialists and academics to deliver a number of health services projects specific to regional and rural health care needs. In addition, the Victorian Cancer Agency has maintained some RTNV core capacity at the existing six sites, and has added two new sites at Latrobe Regional Hospital and Mildura Base Public Hospital. It is hoped that the RTNV will assist in bridging the gap in cancer outcomes between rural and metropolitan cancer patients and serve as a demonstration project for other jurisdictions.

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References are available online.

- 1 Crawford-Williams F, Goodwin B, March S, et al. Cancer care in regional Australia from the health professional's perspective. *Support Care Cancer* 2018; 26: 3507–3515.
- 2 Coory MD, Ho T, Jordan SJ. Australia is continuing to make progress against cancer, but the regional and remote disadvantage remains. *Med J Aust* 2013; 199: 605–618. <https://www.mja.com.au/journal/2013/199/9/australia-continuing-make-progress-against-cancer-regional-and-remote>
- 3 Banks P, Matheson LM, Morrissy K, et al. Characteristics of cancer diagnoses and staging in South Western Victoria: a rural perspective. *Aust J Rural Health* 2014; 22: 257–263.
- 4 Cancer in Victoria: Statistics & Trends 2018. Victorian Cancer Registry. Cancer Council Victoria, Melbourne, Nov 2019. <https://www.cancervic.org.au/downloads/cec/cancer-in-vic/Cancer-in-Victoria-2018.pdf> (viewed Oct 2020).
- 5 Chow CJ, Habermann EB, Abraham A, et al. Does enrollment in cancer trials improve survival? *J Am Coll Surg* 2013; 216: 774–780.
- 6 Sabesan S, Burgher B, Buettner P, et al. Attitudes, knowledge and barriers to participation in cancer clinical trials among rural and remote patients. *Asia Pac J Clin Oncol* 2011; 7: 27–33.
- 7 Donnelly CB, Wotherspoon AC, Morris M, et al. A population-level investigation of cancer clinical trials participation in a UK region. *Eur J Cancer Prev* 2017; 26: S229–S235.
- 8 Emery JD, Gray V, Walter FM, et al. The Improving Rural Cancer Outcomes (IRCO) Trial: a factorial cluster-randomised controlled trial of a complex intervention to reduce time to diagnosis in rural patients with cancer in Western Australia: a study protocol. *BMJ Open* 2014; 4: e006156.
- 9 Queensland Health. An analysis of health and medical research conducted in Queensland public hospitals (January 2011 to December 2016). Brisbane: State of Queensland (Queensland Health), 2017. [https://www.health.qld.gov.au/\\_\\_\\_data/assets/pdf\\_file/0026/667322/analysis-of-queensland-health-medical-research-2011-2016-june2017.pdf](https://www.health.qld.gov.au/___data/assets/pdf_file/0026/667322/analysis-of-queensland-health-medical-research-2011-2016-june2017.pdf) (viewed Oct 2020).
- 10 Sabesan S, Zalberg J. Telehealth models could be extended to conducting clinical trials—a teletrial approach. *Eur J Cancer Care* 2018; 27: e12587.
- 11 Cancer Trials Australia. CTA announces partnership in delivering coordinated Electronic Document Management for Victorian study sites. 22 Nov 2018. <https://www.cancertrialsaustralia.com/2018/11/22/edm/> (viewed Oct 2020).
- 12 Velos. Velos partners with Cancer Trials Australia for largest international deployment of Velos eResearch. 16 Feb 2012. <https://velos.com/velos-partners-cancer-trials-australia-largest-international-deployment-velos-eresearch-20120216> (viewed Oct 2020).
- 13 Clinical Oncology Society of Australia. Australasian Tele-Trial Model: access to clinical trials closer to home using tele-health. Sydney: COSA, 2016. <https://www.cosa.org.au/media/332325/cosa-teletrial-model-final-19sep16.pdf> (viewed Oct 2020).
- 14 Cross H, Collins IM, Woollett A, et al. Implementation of an investigator initiated teletrial. *Asia Pac J Clin Oncol* 2018; 14: 171–172.
- 15 Victorian Comprehensive Cancer Centre. Teletrials. Resources. <https://www.viccompccancerctr.org/what-we-do/clinical-trials-expansion/teletrials/resources/> (viewed Oct 2020). ■